

Training
TRAINING ACTIVITIES

SUMMARY. This regulation facilitates training by prescribing policies and procedures governing training on this installation. This regulation also provides a ready reference and usage guide to Fort McCoy ranges, training facilities and training areas.

APPLICABILITY. This regulation is applicable to any agency, military or civilian, that utilizes any installation facility outside the cantonment area, to include airspace up to 20,000 feet mean sea level (MSL).

PROPONENT EXCEPTION AUTHORITY. The proponent of this regulation is the Range Division, Directorate of Training and Mobilization. The proponent has the authority to approve exceptions to this regulation that are consistent with controlling law and regulation.

ARMY MANAGEMENT CONTROL PROCESS. Following a review of guidance in AR 11-2, it is determined that this regulation does not contain management control provisions.

DISTRIBUTION. Approved for public release; distribution is unlimited.

SUPPLEMENTATION. Supplementation of this regulation is prohibited. This publication represents an entire revision and replaces Fort McCoy (FM) Regulation 385-1, 1 March 1998 and all related changes.

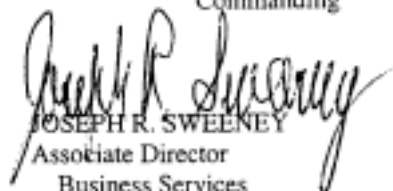
INTERIM CHANGES. Interim changes to this regulation are not official unless authenticated by the installation adjutant. Users will destroy interim changes on their expiration date unless sooner superseded or rescinded.

SUGGESTED IMPROVEMENTS. Users are invited to send comments, suggested improvements, or updates on DA Form 2028 (Recommended Changes to Publications and Blank Forms). Address comments to Range Division, ATTN: AFRC-FM-TMR, 110 East Headquarters Road, Fort McCoy, Wisconsin 54656-5226.

MOBILIZATION STATUS. This regulation remains in effect without change during mobilization or a national emergency.

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DISTRIBUTION: A
Ea. unit training on Fort McCoy

This regulation supersedes Fort McCoy Regulation 385-1, 1 March 98

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CHAPTER 1 INTRODUCTION

1-1. PURPOSE. The purpose of this regulation is to facilitate training by prescribing policies and procedures governing training on this installation. This regulation also provides a ready reference and usage guide to Fort McCoy ranges, training facilities and training areas. For information concerning specific range facilities refer to appendix C (Ranges, Training Areas and Facilities) and appendix D (Range/Facility Matrix).

1-2. REFERENCES. Appendix A of this regulation contains the required and related publications.

1-3. EXPLANATION OF ABBREVIATIONS AND DEFINITIONS. The Glossary of this regulation explains all abbreviations and definitions used in this regulation.

1-4. GENERAL. Requests for exceptions to items covered in this regulation must be submitted by the unit commander to Commander, Fort McCoy, ATTN: AFRC-FM-TMR, 110 E. Headquarters Road, Fort McCoy, WI 54656-5226 at least 90 days prior to the training event.

1-5. RESPONSIBILITIES.

a. Directorate of Training and Mobilization (DTM). Provides direction, supervision and resources required to operate, conduct and maintain the training complex and all training facilities within the scope of Fort McCoy and Department of the Army Directives.

b. TRAINING DIVISION (TRG).

(1) Provides a one-stop service for processing units' requests for training complex facilities.

(2) Hosts a pre-camp conference for annual training (AT) units during the January-February time frame.

c. RANGE DIVISION.

(1) Controls and supervises the overall operation of all ranges, training facilities and training areas to include check-in, briefing and termination/clearance of facility users.

(2) Develops and enforces compliance with range firing and safety procedures.

(3) Operates and maintains the Range Facility Management Support System (RFMSS).

(4) Operates Operations Branch (Range Operations) during all scheduled activities and maintains records of calls and reports pertaining to range accidents/incidents.

(5) Requisitions, stores and issues range supplies and equipment.

(6) Fabricates range support equipment.

(7) Supervises the inspection, maintenance and police of buildings, grounds and other structures within the training complex.

(8) Coordinates with Explosive Ordnance Disposal (EOD) for the disposition of unexploded ammunition.

(9) Approves/disapproves unit-requested non-standard training events.

(10) Coordinates requirements of airspace safety restrictions with the Federal Aviation Administration.

(11) Approves entry into impact areas and vehicular movement within restricted access areas.

(12) Provides hunting area closures for posting on the Fort McCoy game line.

(13) Operates all automated ranges.

(14) Maintains all range targetry, devices and communications equipment.

(15) Provides inspectors for ranges, training facilities and training areas.

(16) Coordinates unit special site requests with other installation agencies.

d. DIRECTORATE OF SUPPORT SERVICES (DSS).

(1) Investigates malfunctions associated with all types of munitions.

(2) Provides construction, repair and maintenance support beyond the capability of the Range Division.

e. DIRECTORATE OF PROTECTIVE SERVICES (DPS).

(1) Coordinates range fire prevention and control measures.

(2) Provides emergency services support through the Police Office and Fire Department.

(3) Provides police support for units crossing State Highway 21.

f. DIRECTORATE OF BUSINESS SERVICES (DBS). Coordinates and assigns the available FM frequencies to be used by units training at Fort McCoy.

g. EXPLOSIVE ORDNANCE DISPOSAL (EOD). Provides technical services for the destruction of unexploded ammunition at the request of Range Operations.

h. INSTALLATION SAFETY OFFICE.

(1) Provides oversight for range, training facility and training area safety.

(2) Reviews risk management plans/worksheets.

(3) Conducts risk management training for units upon request.

(4) Maintains unit radioactive inventory until completion of training.

i. UNIT COMMANDERS.

(1) Planning and conducting unit activities in accordance with the directives of this installation and higher headquarters.

(2) Proper utilization of installation equipment and facilities.

(3) Cancellation of requested support when it is determined the requested support is not and/or will not be needed.

(4) The conduct of safe training to include appointment and certification of qualified Range Safety Officers (RSO), Officers in Charge (OIC), and Non-commissioned Officers in Charge (NCOIC). Rank requirements for OIC/RSO vary for facilities on the training complex. For further information refer to appendix B.

(5) Protection of all unit firearms and ammunition IAW physical security regulations.

(6) Establishing and maintaining liaison with Range Operations to coordinate scheduling and clearing issues.

(7) Ensuring that all unit training officers/NCOs report to Range Operations, building 110, for coordination and in-brief prior to occupation of any training complex facility.

(8) Submitting a copy of risk management plans/worksheets to the Installation Safety Office and, as required by training, to Range Operations NLT 30 days prior to training.

(9) Providing the Installation Safety Office an inventory IAW AR 11-9 of all unit radioactive equipment that will be used at Fort McCoy in support of training. The inventory will be submitted prior to arrival and include the item serial number, nomenclature and stock number. Units may contact the Installation Safety Office at (608) 388-3403 for further assistance.

1-6. POSSESSION AND/OR CONSUMPTION OF ALCOHOLIC BEVERAGES. The U.S. Army and Installation Commander's policy forbids possession and/or consumption of alcoholic beverages in/on any Fort McCoy training range, training facility or training area. When this policy is violated, the Commander, Fort McCoy will decide if the unit will:

a. Suspend field training pending removal of unauthorized beverages and rebriefing of key unit leaders by the DTM. Once this is accomplished, the unit will be allowed to continue training; or,

b. Immediately vacate training facilities and report to a location designated by the DTM. A unit will be allowed to return to the field once its chain of command verifies that a thorough search for alcoholic beverages has been conducted and all personnel have been briefed on prohibitions.

CHAPTER 2 ADMINISTRATION

2-1. RANGE DIVISION FACILITIES.

a. Range Division, building 110, telephone number (608) 388-4848 or FAX (608) 388-3678 controls all Fort McCoy ranges, training areas and training facilities. Located within building 110 are the Range Officer, (608) 388-4629; the Range Safety Officer (608) 388-4526; Range Operations (608) 388-4505/4817; the Range Division Scheduler (608) 388-4142 and the Integrated Training Area Management (ITAM) Chief (608) 388-4792.

b. Maintenance Branch, building 2954, (608) 388-3777, provides maintenance support for the range complex.

c. RETS Branch, building 8129, (608) 388-3004, provides mechanical target support for the range complex and tower personnel for RETS ranges.

2-2. HOURS OF OPERATION.

a. Range Division conducts range business any time training is scheduled. Range Operations/Communications Section operates from the control room in building 110.

b. Range Operations is generally open Monday through Friday 0600 to 1630 when training is not scheduled.

c. Maintenance Branch is open from 0745 to 1545 Monday through Friday.

d. RETS is open anytime a RETS range is scheduled or 0745-1600 Monday through Friday.

2-3. RANGE/TRAINING FACILITY SCHEDULING.

a. Ranges, training facilities and training areas are requested and submitted on Fort McCoy Form 38A to Training Division (TRG), Fort McCoy, ATTN.: AFRC-FM-TMT, 2168 S. 8th Avenue, Fort McCoy, WI 54656-5156. Any changes to scheduled training will be made to TRG (608) 388-3721/3713 or Range Division scheduler (608) 388-4142 at least seventy-two (72) hours prior to scheduled use. The scheduling of training complex facilities by telephone is not authorized. Canceling of requests can be made by telephone but must be followed up in writing.

b. Fort McCoy Form 38A should reach TRG NLT than 30 August annually for all fall and winter training, 3 December annually for annual training, or ninety (90) days prior to MUTA training or other exercises.

c. TRG will send the request to Range Division scheduling office. Range Division scheduling will not honor any request that is not endorsed by TRG.

d. Requests for scheduling can also be done through the Fort McCoy Home Page (<http://www.mccoy.army.mil>). Instructions are provided on the site (type: RFMSS in the search engine.) The Range Division scheduler should be contacted for assistance.

e. Range Division schedules training for complex facilities on a first-come, first-serve basis; however, brigades will receive priority if the Fort McCoy Form 38A is received by 3 December annually for annual training. Force Support Package (FSP) units will receive priority if their requests are received at the same time as a non-FSP unit.

f. Once a facility is scheduled, Range Division scheduling will prepare a unit facility sheet that lists all the approved facilities assigned to the unit. Official notification of approved facilities will be sent to the unit through TRG.

g. Sharing of facilities by units is encouraged. This must be cleared through Range Division scheduling. The unit scheduled for the facility is responsible for the operation and clearance of the facility. Units may be forced to share ranges and training areas based on the number of personnel, type of training and the capability of the range or training area.

h. Battalion size or smaller units can only request six (6) training areas on any given day. Brigades may request more than six training areas for a given day; however, they cannot submit a "blanket request" for all training facilities.

i. When a unit is at Fort McCoy, it may request the use of any facility forty-eight (48) hours in advance.

j. Mobilized units conducting pre-deployment training have a priority over all activities.

k. Units desiring to reconnoiter any facility will report to Range Operations for authorization.

2-4. FACILITY UTILIZATION.

a. The Range Division scheduler maintains statistics reflecting actual utilization of scheduled training complex facilities. In order to be credited for use of a facility, the scheduled unit must open and close the facility IAW the procedures in chapter 5, paragraphs 5-3 and 5-7 of this regulation.

b. Scheduled units must appear on the completed Range Operations daily communications log to be given credit for use of scheduled facilities.

c. Once a training complex facility is scheduled, the unit is required to clear it, unless the unit cancels the request for the facility 72 hours prior to the scheduled date.

d. Units that schedule ranges requiring RETS operators and fail to occupy them within two (2) hours of their scheduled occupation time will have their request canceled unless Range Operations is notified prior to the scheduled time.

2-5. RANGE SUPPLIES, TARGETS AND EQUIPMENT.

a. The OIC of any unit utilizing a training complex facility must ensure that either the OIC or RSO (E-6 or above) for the unit comes to Range Operations and signs for the facility packet. Any changes to range procedures will be briefed at that time.

b. Any unit desiring non-standard equipment or special set-up must submit a request in writing to arrive at Range Operations at least thirty (30) days prior. Units needing radio controlled pop up targetry, will request the type and number through Range Division scheduling on the Form 38A.

c. Target Repair:

(1) Every effort is made by range personnel to ensure that targets and target frames are in good repair prior to a unit utilizing a range. It includes preventive maintenance, repairs to noted problems and pre-checks; however, unforeseen problems sometimes do occur. Units should notify Range Operations of any problem that arises and cannot be corrected.

(2) Only Range Division personnel are authorized to repair and set up mechanical targets. Requests for repair must be forwarded to RETS Branch through Range Operations. RETS Branch personnel will

repair or replace the malfunctioning unit. Units attempting to repair any mechanical targets may be liable for the cost of any damage and subject to suspension of use of Fort McCoy facilities.

(3) Targets and target materials are available for use on Fort McCoy ranges. If paper targets are used on canvas backing, the unit is responsible for the pasting of the target. The targets must be cleaned of all paper down to the canvas and returned to the target shed at the completion of firing. Targets and target materials will be left in range target sheds. Maintenance Branch **DOES NOT** supply targets or target materials for a unit's home station use. Unserviceable target boards will be set aside for removal by the Range Inspectors.

d. Units are responsible for supplying scorecards, staple guns, staples, all applicable manuals for the training being conducted and any other materials such as sandbags, wood, etc. which might be needed to conduct training.

e. Units should note on their site clearance sheets, provided in each facility book, any problems with a facility so that repairs can be accomplished before another unit arrives.

2-6. SECURITY AND SAFEGUARDING OF RANGE EQUIPMENT.

a. All Range Division equipment signed for by the unit should be safeguarded, secured and accounted IAW AR 190-11.

b. The hand receipt holder is responsible for turning in statements for all lost or damaged Range Division equipment. The DTM Supply Section will then determine if a report of survey will be initiated.

c. Any item of \$25.00 or more in value cannot be stored on the ranges without a guard.

d. Immediately notify Range Operations when evidence of a break-in is observed. To prevent removal, destruction, movement or concealment of potential evidence, the scene should be safeguarded until the arrival of DOD Police. All personnel involved in the discovery will remain on site until released by DOD Police.

2-7. LATRINE, WATER AND SHOWER POINT.

a. Latrine facilities are **not** available on most of the ranges and training facilities. It is the responsibility of the using unit to request portable latrines.

Requests for portable latrines are submitted through TNG on FM Form 38 to Directorate of Support Services (DSS). The only latrine facilities are located on Ranges 1, 2, 29 and 32. For more information refer to chapter 16 of this regulation.

b. The use of portable latrines (porta-potties) is strongly encouraged to prevent contamination of the environment. If these are unavailable due to funding or mission constraints, contact Range Operations (building 110, ext. 2-4848/2951) to complete a special site request and to determine suitable locations to establish field latrines according to the environmental overlay map. Portable latrines are required during all winter field operations.

c. Potable water is not available on all ranges and training facilities. Units are responsible for obtaining and maintaining adequate water supplies. The potable water fill point, shower point and field laundry site are located at the corner of South 11th and South Y (NE corner of the old hospital area), XJ 88107688. Ranges 2, 29 and 32 have potable water.

d. Units will have hand-washing facilities available at all latrine sites.

2-8. OIC AND SAFETY OFFICER CERTIFICATION.

a. All OICs and Safety Officers require certification by Range Operations prior to signing for and utilizing any training complex facility.

b. Certification is a two-step process:

(1) The first step is a viewing of the Fort McCoy Range Safety Certification videotape. At the completion of the viewing, Range Operations will enter the individual into the RFMSS system and issue the individual a Range Control Safety Certification Card. The range certification card will be in the possession of the individuals performing duties as OIC or RSO. This certification is good for one year from the date of issue. The videotape consists of two films:

(a) Range Safety Briefing.

(b) Lyme disease - A Growing Threat.

(2) The second step consists of the unit commander assigning the individual as an OIC or RSO for a facility by signing the back of the Range Control Safety Certification Card. The assignment

implies the individual is qualified to conduct the type training desired.

(3) Civilian agencies may have personnel certified. These personnel must be at least 18 years of age. Civilian agencies will have a certified firearms instructor designated to attest that the individual receiving the certification is qualified to conduct the type training desired.

c. Certification videotape viewing at Range Division is scheduled as follows:

(1) Monday through Friday - 1400.

(2) Saturday - 0600.

(3) Units may request special viewing times through Range Operations.

d. For military organizations, certification is issued to personnel E-6 and above only. Units desiring to certify E-5 personnel will submit an exception to policy request, signed by the first O-5 or above in the unit chain-of-command, to Range Operations stating the reason why certification is necessary. E-5 personnel will only be certified as Safety Officers.

e. Units may obtain this videotape from Range Operations or Training Support Center and show it at home station drills. The unit then submits a request to Range Operations for certification with a roster, signed by the unit commander, containing the names, rank and last four of SSN of the individuals viewing the videotapes and date of viewing. The unit request should state whether the unit wants the Range Control Safety Certification Cards mailed or kept for issue on arrival. Requests arriving later than 14 days prior to unit arrival on Fort McCoy should be kept for issue to the unit.

f. All unit leadership (SGT and above) should read the Environmental and Natural Resources Customer Support Package, available at Range Division, prior to the training cycle.

2-9. DE-CERTIFICATION.

a. The Range Officer or his representative may suspend certification of personnel in violation of basic safety regulations.

b. Suspension of certification consists of removal from the active qualified standing list of OIC and Safety Officers for a period of not less than 60 days and surrendering of the Range Control Safety Certification Card issued by Range Operations.

c. Re-certification will consist of:

(1) A written certification by the individual's commander (O-5 or above) that the individual has undergone retraining and has been requalified to train with the weapon system, ammunition or training facility involved.

(2) A viewing of the range safety certification videotape.

d. Basis for de-certification, includes **but is not limited to:**

(1) Firing on ranges without Range Operations wet status approval.

(2) Failure to monitor and respond to Range Operations communications calls.

(3) Failure to adhere to special instructions of the training facility.

(4) Continuing to fire during Range Operations initiated cease-fire or without communications with Range Control.

(5) Failure to report a fire downrange.

(6) Failure to provide adequate protection for equipment and ammunition on the range complex.

(7) Failure to heed a warning of noncompliance with safety regulations by a Range Division representative.

(8) Failure to submit required reports.

CHAPTER 3 TRAINING COMPLEX COMMUNICATIONS

3-1. GENERAL.

a. Range Operations communications is located at Range Division Headquarters, 110 Headquarters Rd.

b. Any time a unit operates outside of the cantonment area, it will establish and maintain communications with Range Operations. **Units will maintain communications with Range Operations until the unit actually departs the range, training facility or training area occupied.** Range Division does not issue radios to customer units. All units training outside the cantonment area should utilize their RC-292/OE-254 antennas when using series 12 or SINCGARS radios.

c. Units operating within cantonment may be required to establish communications with Range Operations based on the type training being conducted.

d. Range Operations frequencies are for range to unit communications only. These frequencies will not be used for unit internal communications including motor convoy operations to and from Fort McCoy.

e. Unit communication pre-checks must be made from unit to unit radios, not with Range Operations.

f. If a unit experiences a radio failure, it will go into a cease fire/cease training status until communications are re-established with Range Operations.

g. When a "hot mike" occurs on the primary radio frequency all units will switch to the alternate frequency. Range Division will then inform units when to switch back to the primary frequency.

3-2. RANGE DIVISION FREQUENCIES AND PHONE NUMBERS.

a. FM: 46.80 MHz (New squelch) PRIMARY (Non-secure)

FM: 41.90 MHz (Old squelch) ALTERNATE (Non-secure)

b. UHF: 247.4 MHz (Aircraft)

c. Phone: 2-4848

d. MAG: 4848

e. Emergency MAG line phone numbers:

<u>Location Name</u>	<u>Map grid</u>	<u>Mag #</u>
Hanging Rock	894 890	6502
Hazel Dell	894 858	6503
Landfill	889 791	6504
FP 423	908 721	6506
Young Field	877 691	3376
Scott's Junction	868 709	2553

3-3. CELLULAR PHONES. Cellular phones are **NOT** authorized as a primary or secondary means of communication with Range Operations.

3-4. LIVE FIRE COMMUNICATIONS.

a. Units conducting live fire training will establish and maintain two forms of communications with Range Operations.

(1) FM radio is the primary means of communications.

(2) MAG lines or tower phones may be used as secondary means. If a MAG line or tower phone is not available, two FM radios are required.

b. Artillery units desiring the Battalion FDC to control firing can **coordinate** with Range Operations 30 days **prior** to the day of firing. The Battalion FDC can then open, close and obtain wet/dry times for the firing points under its control provided the Battalion FDC has two means of communication with the firing units (one means may be digital.) The firing units are responsible for monitoring the Range Operations frequency for emergency situations. Battalion FDCs under this system will maintain a DA Form 1594 indicating hourly radio checks with their subordinate units and must be able to demonstrate the two means of communication to Range Division representatives when inspected.

c. The OIC has the responsibility for maintaining communication with all vehicles firing and all aircraft conducting aerial gunnery. If communication is lost with the vehicle or aircraft, the vehicle/aircraft must immediately cease-fire and go to a safe status until communication is re-established.

d. Range Operations will initiate communications checks hourly on an unscheduled basis and announce the current wet bulb or wind chill.

(1) If a communications check is missed, Range Division representatives will put the unit in a cease-fire/cease training status until communications are established. Once communications are re-established the unit will be required to make communications checks with Range Operations every 30 minutes.

(2) If a second communications check is missed, the unit OIC and/or RSO may be relieved by Range Division personnel and the unit will be put into a cease-fire/cease training status until a new, properly qualified OIC and/or RSO is in place.

3-5. NON-FIRE TRAINING COMMUNICATIONS.

a. Units occupying a training area, training facility or certain cantonment areas will establish communications with Range Operations. The senior maneuver command's Tactical Operations Center (TOC) may assume this role with permission from Range Operations. Units operating under a TOC will occupy with Range Operations and inform Range Operations which TOC will be controlling the unit. Units may then go under their TOC when given permission by Range Operations. To keep RFMSS accurate TOCs will inform Range Operations of changes in occupied areas of more than 12 hours and each morning NLT 0800.

b. TOCs will maintain a DA Form 1594 showing hourly radio checks with units under their control. The DA Form 1594 will be checked periodically by Range Division representatives. Failure to follow these procedures may result in the closure of the TOC concept until corrections are made.

c. Communications Wire. Communications wire will be laid on the ground and buried 12 inches when crossing roads/trails. When overhead communications wire is necessary, wire will be a minimum of twenty (20) feet above the road/trail and marked with twelve (12) inch strips of engineer tape, four (4) feet apart. Wire crossing roads/trails will be tagged and marked with date and units name. Placement of wire on poles that support electric distribution lines is prohibited. Placement of communications wire in the cantonment area will be coordinated with the Installation Safety Office, ext. 2-3403.

(1) All communications wire must be policed up after training is completed. Do not place communications wire in trash dumpsters.

(2) Communication wire disposal. Place communication wire in specially marked dumpsters located at the Installation Transfer Station. Copper and aluminum wire must be separated and placed in the proper dumpster marked aluminum commo wire and copper commo wire.

3-6. OBSERVATION POINT (OP) COMMUNICATIONS. OPs will maintain communications with Range Operations. Occupied OPs are the primary elements responsible for reporting unsafe acts in and around the impact area.

3-7. RADIO PROCEDURES.

a. Call signs:

(1) The call sign for Range Operations is Fort McCoy Range Control.

(2) The call sign for units utilizing range complex facilities is the facility name and number i.e. Range 33, Rappel Tower, Land NAV 2, Training Area C-8. Unit call signs (tactical call signs) will not be used.

b. Approved calls on the Range Operations net include:

- (1) Occupying range complex areas.
- (2) Requesting wet/dry/closing times.
- (3) Requests for medical assistance.
- (4) Accident/incident reports.
- (5) Official Range Operations business.

3-8. UNIT INTERNAL FREQUENCIES. Unit desiring internal frequencies can request a set of frequencies from DBS through RCSB at least 30 days prior to desired use.

3-9. EMERGENCY COMMUNICATION. Units may utilize any of the means in para 3-2 to call Range Operations in an emergency. During emergency operations all units will monitor the Range Operations net and not initiate communications, unless for an emergency, until told by Range Operations that the emergency has been handled. Units may be placed in a cease fire status depending on the nature and location of the emergency.

CHAPTER 4 MEDICAL SUPPORT

4-1. REQUIREMENTS. Units conducting training will have the following readily available:

a. Transport vehicle: A transport vehicle on Fort McCoy is any covered military wheeled vehicle capable of carrying a litter patient. The transport vehicle must have a radio capable of monitoring Range Operations. Ammo, equipment and/or seats must be removed. The vehicle must be able to negotiate terrain and have a map to the TMC. Tracked vehicles will not be used as transport vehicles.

b. A military and/or civilian litter. A field expedient litter is not acceptable.

c. A military first aid bag or combat lifesaver bag.

d. Commanders will provide whatever medical personnel they determine necessary based on the type of exercise and unit's state of training unless otherwise specified in the range packet or AR 385-63.

4-2. MEDICAL EVACUATION.

a. Notify Range Operations IMMEDIATELY. Units will maintain communications with Range Operations throughout all emergencies to include the transport vehicle.

b. Provide Range Operations with the following information:

(1) Name, grade, and unit of the requester.

(2) Location of the patient(s) (six digit grid coordinates).

(3) Number of patients.

(4) Nature of the injury.

(5) Vital signs of the patient(s), if possible.

(6) Actions taken by the unit. (INJURED PERSONNEL SHOULD NOT BE MOVED, UNLESS TO AVOID FURTHER INJURY, UNTIL MEDICAL PERSONNEL ARRIVE.)

c. Range Operations will then assist the unit OIC in determining if ground or air evacuation will be needed.

d. Aero-medical Evacuation (MEDEVAC). The unit will provide Range Control information on how the landing zone (LZ) will be marked when utilizing air MEDEVAC support.

e. Range Operations will alert the Fire Department and, if requested, have an installation ambulance meet the unit evacuation vehicle for transfer and transportation of the evacuee(s) to medical facilities.

4-3. INCIDENT REPORT. Following all emergencies the unit OIC will fill out an accident/incident report, available in the range packet or at Range Division, building 110, and deliver it to Range Operations within one (1) hour.

4-4. SICK CALL AND NON-EMERGENCY MEDICAL TREATMENT.

a. Units will utilize the TMC, when open, for injuries and illness requiring non-emergency medical attention.

(1) The TMC is normally open Monday through Friday from 0700 to 1530 with sick call from 0700 to 0900.

(2) Times of operation may be adjusted during the summer based on availability of medical personnel. Time adjustments will be put out during the daily coordination meeting at Range Division.

b. Sick call when the TMC is not operational:

(1) The unit will transport personnel with injuries and illness requiring non-emergency medical attention (sick call) to St. Mary's Hospital, Sparta. The unit will notify Range Operations **BEFORE** transport with the following information:

(a) Name, grade, and unit of the requester.

(b) Number of patients.

(c) Nature of the injury.

(2) Units may pick up a map to St. Mary's Hospital at Range Operations, building 110.

(3) Units will coordinate with St. Mary's Hospital prior to departing Fort McCoy area for proper handling of medical billing requirements (LOD).

4-5. CANTONMENT EMERGENCIES. Units training in Cantonment, unless under Range Operations auspices, will dial **911** for emergencies.

CHAPTER 5
RANGE, TRAINING FACILITY AND
TRAINING AREA OPERATIONS

5-1. GENERAL.

a. The OIC of each site is responsible for all activities involving his/her site.

b. Units occupying training areas must maintain a 350-meter distance from all active artillery/mortar firing positions.

c. Periodically during scheduled Range Division personnel will conduct training inspections to ensure units are training in a safe and correct manner. Range Division personnel will utilize the Training Inspection Checklist, appendix H, of this regulation while conducting inspections.

5-2. TRAINING HOURS.

a. Units on ranges and firing points may occupy and fire as reflected on the training schedule.

b. Tactical areas may be occupied on a 24-hour basis.

c. All other training facilities, except night land navigation courses and the EPW compounds, will not be utilized after dark without Range Operations approval.

d. Units conducting firing on scheduled night ranges must stop firing NLT one hour prior to darkness if another unit is scheduled to utilize that range for night fire.

e. At times there may be scheduled cease-fires initiated by Range Operations. The times for these cease-fires normally will be published in the Fort McCoy Range Bulletin.

5-3. RISK MANAGEMENT. Risk management is the process of identifying and controlling hazards. For more information on risk management contact the Installation Safety Office, ext. 2-3403.

5-4. OCCUPATION PROCEDURES.

a. All units are required to call Range Operations and request an occupation time for any range, training facility or training area the unit is training

on. **This request will be done as soon as the unit arrives on site.** Unit advance parties will have a radio capable of communicating with Range Operations and will request an occupation time as soon as they arrive on the training site.

b. When requesting the occupation time, units will submit the following information: (Note: the unit should have the information prepared before initiating the request.)

(1) Facility

(2) Unit

(3) OIC initials, rank and last four of SSN

(4) Six digit grid location (training areas only)

c. The Range Operations communications operators will then issue the unit an occupation time and give his/her initials.

d. This request is done via FM radio.

e. Units utilizing pyrotechnics in training areas will inform Range Operations before utilizing them.

f. Any discrepancies noted for the site will be called in at this time to have Range Division personnel verify the discrepancy.

g. Any discrepancy such as trash or fighting positions will become the unit's responsibility if not verified by Range Division personnel.

5-5. WET TIME PROCEDURES.

a. All units conducting live fire will request a wet time from Range Operations before firing.

b. When requesting a wet time the unit will submit the following information:

(1) Initials, rank and last four of SSN of the RSO.

(2) Type of weapon.

(3) Type and lot numbers of all ammunition.

(4) Verification that aid bag, litter and transport vehicle are on site.

(5) Identify second means of communication and make a communications check.

c. The Range Operations communications operators will then issue the firing facility a wet time and give their initials.

d. This request is done via FM radio.

5-6. 1ST ROUND PROCEDURES. Artillery and mortar observers will report that the first round for each firing point was observed safe.

5-7. NIGHT FIRE.

a. Night Fire may be conducted on any range unless prohibited in range packet. To do so, the following criteria must be met.

(1) Right and left limit markers must be marked with red lights and visible from the firing line.

(2) The range flagpole must be marked with a red light.

(3) To ensure proper orientation of weapons the OIC/RSO may be required by Range Operations to wear night vision goggles based on the type of training being conducted.

b. If the required lighting is not currently on the range and the unit must install the necessary lighting (e.g., chemlight, flashlight), the unit must contact Range Operations prior to going down range to install lights.

5-8. DRY TIME/CLOSING TIME PROCEDURES.

a. Units will request a dry time/closing time from Range Operations at the conclusion of training.

b. When requesting a permanent dry time/closing time the unit reports the following to Range Operations:

(1) Total rounds expended by type

(2) Number of personnel trained on the site to include cadre

(3) Number of tactical vehicles on site, by type, per the instruction sheet in the range packet.

c. Units should request a temporary dry time for stoppages of firing for more than 30 minutes. Units will inform Range Operations if it is departing the site during the temporary dry time.

d. After the Range Operations communications operator gives a temporary dry time and his/her initials, a unit may not resume firing/training without requesting permission from Range Operations.

5-9. CLEARANCE/DEPARTURE.

a. An inspection is conducted only after the area is prepared for clearance using the clearance sheet in each range packet. Units will request a clearance time from Range Operations. Ranges operated by RETS Branch will be cleared by the operator on site. Units in training areas will provide Range Operations with a link up grid. A sample of these forms can be found in appendix H of this regulation. A clearance appointment may be made with Range Operations up to 24 hours in advance.

b. Inspections are scheduled on a first request, first serve basis. Inspectors will arrive as soon as they can and the number of requests for clearance will determine the time taken.

c. Units that are not prepared and/or have major discrepancies will not be cleared and may go to bottom of the list for clearance.

d. Units conducting night fire usually may be cleared the next morning, no earlier than 0700.

e. Inspection of the training site should be scheduled for the last day the unit plans on training on the site (i.e. if a unit has the facility scheduled the next day, there is no need to request inspection prior to departure for the first day.) However, the unit will request a departure time from Range Operations before departing the facility.

f. After inspection by a Range Division inspector, the unit will request a departure time from Range control.

g. All range areas and buildings will be policed and swept of all debris and trashcans emptied before the range will be cleared. Building doors and windows must be properly secured, radios turned off and circuit breakers turned off after Range Division has inspected the range.

5-10. ACTIONS BEFORE TRAINING/FIRING. The OIC will ensure:

a. Communications are established with Range Operations.

b. Range Operations is notified of six-digit grid and use of pyrotechnics. (Training areas only.)

- c. The red flag or flashing red light is properly displayed.
- d. All necessary guards and/or barriers are in place per the range packet special instructions.
- e. Safety briefings are conducted.
- f. Limit markers are in place and visible (and lit if night fire).
- g. Ammo point guards are posted.
- h. All vehicles are parked in designated places.
- i. All ammunition is checked for mixture, especially for exercises utilizing blanks.
- j. A function check of all weapons will be completed before firing.

5-11. ACTIONS DURING TRAINING/FIRING.

The OIC will ensure:

- a. Communications are maintained with Range Operations (both forms of communications for units firing).
- b. Air guards are posted to watch for stray aircraft.
- c. All range complex fires are immediately reported.
- d. All personnel remain in the proper uniform with the necessary safety equipment.
- e. Training is monitored for safety violations and corrective actions are taken.
- f. All accidents and/or incidents are reported to Range Operations immediately.

5-12. ACTIONS AFTER TRAINING/FIRING.

The OIC will ensure:

- a. Range flag is lowered.
- b. All guards are recalled and barriers are removed.
- c. All weapons are cleared and soldiers checked for brass or ammunition.
- d. Clearance is requested from Range Operations.
- e. Range Division equipment is returned before departure from the training complex.

5-13. PUBLICATIONS AND PAPERWORK.

OICs will ensure the following items are on hand before training/firing:

- a. Fort McCoy Map
- b. Fort McCoy Regulation 350-1
- c. Copy of the approved unit facility sheet
- d. Appropriate FM's and TM's for the type training being conducted
- e. Approved overlays for road marches/smoke
- f. Approved safety diagram (artillery/mortars)
- g. Special site requests (if applicable)

5-14. ROADS, GATES AND BARRIERS.

- a. Range roads and tank trails will not be closed or blocked without Range Operations permission.
- b. Units desiring to close a part of a range road or tank trail should submit the request to arrive at Range Operations NLT 30 days prior to the desired dates. Hard surface roads will not normally be closed for any reason.
- c. Range service roads and firebreaks (downrange areas) are off limits to unauthorized personnel.
- d. The scheduling and assignment of a training area does not include the exclusive use of roads or established tank trails within the area unless approved by Range Operations.
- e. Gates:
 - (1) Gates are placed at several locations throughout the training complex for safety purposes.
 - (2) Permission from Range Operations is necessary to bypass closed gates.
- f. Barriers:
 - (1) Units are responsible for placing barriers as prescribed in the special instructions for some training complex facilities.
 - (2) Permission from Range Operations is necessary to bypass any barrier.

(3) All barriers need to be well marked. Barriers must be illuminated during hours of darkness. Guards will be posted at barriers to warn traffic.

(4) Units desiring to erect barriers, other than prescribed in the special instructions for a facility, will submit a request to arrive at Range Operations NLT 30 days prior to the desired date of use.

(5) Barriers placed by units with Range Operations permission will be readily movable by the personnel manning the barrier in order for emergency vehicles to bypass them for emergencies.

5-15. TRAINING ACCIDENTS/INCIDENTS.

a. Training accidents/incidents include the following but are not limited to:

(1) Ammunition/weapon malfunctions or misfires over 30mm

(2) Personnel injury

(3) Personnel illness requiring transport

(4) Range complex fires

(5) Erratic rounds

(6) Leaks from or loss of equipment containing radiation

(7) Aircraft incidents or mishaps

(8) Fuel or other hazardous material spills

b. For information on actions and reports for training accidents/incidents refer to chapter 6 of this regulation.

5-16. DOWN RANGE AND IMPACT AREA CONTROL.

a. Personnel are not allowed down range past established target frames on 25-meter ranges, past firing lines on all other ranges or into the impact area without Range Operations approval.

b. Permission to go down range is requested from Range Operations. Upon approval the unit should minimize time spent down range. Upon completion of the requested task, notify Range Operations that all personnel are back up range.

c. Permission to enter the impact area requires a written request to Range Operations and must be received NLT 30 days prior to the desired date.

d. Units will not place targets or other materials downrange or in the impact area without Range Division approval. Range Division will not approve Glass, reflective metals or other laser reflective materials.

5-17. OFF LIMITS AREAS.

a. All ranges and training areas are off limits except for authorized training, repair or hunting.

b. North Impact Area Coordinates: XJ8185 907, southeast to XJ83167876, south to XJ83187869, east to XJ83767885, northeast to XJ84778032, northeast to XJ87418359, north to XJ87328596, northwest to XJ87068627, northwest to XJ86398649, southwest to XJ86208638, northwest to XJ86058648, southwest to XJ84278577, west to XJ81858552, southwest to XJ81868532 and south to the origin. This impact area is a permanent dud area; it is unsafe for entry!

c. Training Areas adjacent to post housing areas are off-limits to all pyrotechnics, smoke, CS, blanks, helicopter, airmobile training, and bivouac areas.

d. All lakes, streams, wetlands, and the land within 50 meters of their shores are off-limit areas to vehicles (including bivouacs) unless specifically stated as a training requirement, and approved in writing by Range Operations.

e. Training areas M-2 and M-3 will be used by exception only due to conflicts with RG 29 (MPTR). When the gates are closed no one is allowed entry on to RG 29. Attempting to avoid or go around the gates is strictly prohibited. All units that are actively using RG 29 will enter through Gate 5 on RG 29 located at Grid XJ865782. Coordination must be made with RG 29 personnel.

5-18. UNIFORM.

a. During live fire exercises personnel are required to wear a minimum of earplugs and helmets. Marine units conducting marksmanship training may fire without helmets.

b. Certain ranges require other items such as flak vest and/or face shields to be worn during firing.

c. The unit commander determines all other uniform items.

d. Range Division may approve requests for exception to the required uniform policy, signed by an O-5 or above, based on the type training being conducted.

5-19. PERSONAL WEAPONS. The firing of personal weapons is not allowed on the range complex except for the following:

a. Civilian law enforcement personnel on scheduled ranges.

b. Civilian personnel utilizing the scheduled recreation range (Range 105) or other ranges scheduled by the Rod and Gun Club.

c. Hunters in authorized hunting sites.

5-20. DISPOSITION OF MALFUNCTIONS, DUDS AND MISFIRES.

a. Duds:

(1) A dud is any explosive munition that has been fired or otherwise activated and has failed to detonate. **ALL PERSONNEL WILL BE WARNED NOT TO PICK UP, HANDLE OR IN ANY WAY DISTURB ARTILLERY OR MORTAR PROJECTILES, ROCKETS, FLARES, GRENADES, PYROTECHNICS DEVICES, OR ANY OTHER EXPLOSIVE AMMUNITION THAT HAS BEEN FIRED AND FAILED TO DETONATE. OBJECTS NOT READILY IDENTIFIABLE SHOULD BE TREATED AS DUDS.**

(2) Duds are not to be disturbed under any circumstances. Duds will be clearly marked, no closer than ten (10) meters, and a guard will be posted. The guard will remain until released by Range Operations or EOD. When personnel locate duds they must submit the following information to Range Operations:

- (a) Coordinates of dud.
- (b) Number of duds.
- (c) Type of duds, if known, and a description.
- (d) How marked.
- (e) Name and rank of person reporting dud.
- (f) Reporting persons unit and present location.

(3) Range Operations will call EOD to dispose of duds.

(4) On Range 8 (hand grenade range) duds are called in as they occur. No additional throwing is allowed on the side of the range with the dud until cleared by EOD personnel.

b. Misfires: Follow all appropriate misfire procedures for the weapon and, when directed, the misfire ammunition will be removed from the weapon, repackaged in the original container marked "misfire," returned to the ASP as unserviceable ammunition and units will turn in misfired and malfunctioned ammunition to the Ammunition Supply Point (ASP).

5-21. DEMOLITION EXERCISES.

a. Charges are primed just prior to use at the demolition site. Blasting caps and charges are carried separately to the priming site. Primed charges are placed, not thrown, into the demolition pits.

b. The power source for detonating charges is secured by locking and the key is in the possession of the person doing the priming. When using a portable power source the blasting machine or its activating device is also in the possession of the person doing the priming.

c. Electric blasting caps and circuits can be energized to dangerous levels from outside sources such as static electricity, electric current, radio communication, high tension wires or other like sources. Precautions must be taken to reduce possible premature ignition of electrical blasting caps by keeping wires shunted until primed and ignition is desired.

d. Demolition exercises are not conducted during electrical storms or during dust, sand or snow storms of severity great enough to produce atmospheric static electricity or limit the line of sight to the demolition site.

e. Notify Range Operations of intent to detonate and size of detonation five (5) minutes prior to detonation.

f. Immediately following detonation notify Range Operations that detonation has occurred and no injuries have occurred.

g. The controller on duty will dispatch an inspector to investigate if Range Operations does not hear from

the unit within three minutes of an announced detonation time.

h. Fougasse: Safety is the primary consideration in the construction and use of fougasse. A unit fire fighting team with two (2) carbon dioxide fire extinguishers and shovels per team will be present during firing. No smoking will be allowed within twenty (20) meters of the devices.

(1) Blasting caps will not be emplaced until immediately prior to firing. A minimum safe distance of 100 meters from personnel and roads and 75 meters from wooded areas will be observed.

(2) Napalm fougasse devices will be emplaced so that the tops of the devices are not more than two (2) inches above the ground. A minimum safe distance of fifty (50) meters will be observed.

(3) Fougasse operations will take place only on Range 17A.

i. Units will have EOD dispose of rocket motors after firing MICLICs.

5-22. NBC TRAINING, CS, SMOKE OPERATIONS AND PYROTECHNICS.

a. Because of the danger of long-term eye damage for contact lens wearers, chemical agents (CS) are not allowed outside of the two (2) designated NBC Chambers. Units desiring to simulate NBC attacks should use yellow smoke.

b. Smoke grenades, smoke generators and pyrotechnics may be used to reinforce training. Smoke generators may only be used with prior approval from Range Operations. A special site request for use of the smoke generators must be received at Range Operations NLT 30 days prior to desired use. Request will include a 1:50,000 overlay and date/time frame the unit will employ the generator. Smoke will be employed only under the supervision of qualified NBC personnel as defined by AR 350-41, chapter 11.

c. Smoke is not employed:

(1) Within 500 meters:

(a) Of the installation housing area.

(b) Of the installation boundary.

(2) Within 200 meters:

(a) Of other units training and not involved in the exercise.

(b) Of any hard surface road.

(3) Anywhere in the cantonment area.

(4) In any building.

d. Anytime smoke is used on or crosses an unsurfaced road, the using unit will provide road guards and/or temporary barriers (if approved by Range Operations) at a distance of not less than 500 meters on each side of the site.

e. All expended smoke canisters and residue will be policed and returned to the ASP.

f. Weather and other safety factors such as fire code, location and wind direction must be factored in when employing smoke and other pyrotechnics.

g. CS employment:

(1) Only CS capsules are allowed in the NBC chamber.

(2) CS grenades are not employed within confined spaces.

h. Smoke operations:

(1) All personnel must wear protective mask:

(a) Before and during any exposure to a concentration of smoke produced by M8 white smoke grenades or smoke pots (HC) or metallic powder obscurants.

(b) When passing through or operating in dense smoke (visibility less than 50 meters), such as smoke blankets.

(c) When operating or passing through a smoke haze (visibility greater than 50 meters) and the duration of exposure will exceed 4 hours.

(d) Anytime exposure to smoke produces breathing difficulty, irritation or discomfort. Such effects in one individual should serve as a signal for all similarly exposed personnel to mask.

(e) When using smoke during MOUT training.
NOTE: The protective mask is not effective in oxygen-deficient atmospheres. Care must be taken

not to enter confined spaces where oxygen may have been displaced.

(f) While operating a smoke generator and it is impossible to stay upwind of the smoke.

(2) HC smoke pots:

(a) HC smoke pots exposed to water cannot be used.

(b) HC smoke pots are not used inside buildings, tents or other enclosed areas.

(c) All expended smoke pots will be policed and returned to the ASP.

(3) When employing smoke grenades or smoke pots the firer must keep his/her face averted during activation to prevent burns. The firer then should move quickly away after activation (10 meters for smoke grenades and 30 meters for smoke pots).

i. Trip flares and booby traps:

(1) Trip flare and booby trap positions must be cleared of all flammable material.

(2) Each service trip flare should be guarded to prevent personnel from approaching within 2 meters of the emplaced flare.

(3) No unauthorized or commercial devices will be employed as booby traps.

(4) To prevent accidental contact by other personnel all trip flares and booby traps must be removed when the unit leaves the site.

j. Grenade and artillery simulators must be immediately thrown once activated. Holding or cook off is not allowed. Do not hold the M80 when ignited as it detonates 3 to 5 seconds after ignition of the fuze. Simulators will not be used within fifteen (15) meters of personnel or vehicles. Personnel using these devices will be properly trained prior to using the devices.

k. A decontamination (DECON) site has been established near Alderwood Lake. Units wishing to utilize other areas for DECON training will submit a special site request to Range Operations NLT thirty (30) days prior to the training date.

a. The only approved site for water-crossing training is Alderwood Lake. Unit must submit a safety plan and risk assessment to Range Operations NLT 30 days prior to scheduled training.

b. During training, when tracked vehicles are involved in amphibious crossings of large bodies of water (e.g., lakes or wide rivers), use a rescue boat with two qualified lifeguards (American Red Cross Senior Certificate or equivalent). When swimming in bodies of water that are muddy or when the depth of water is such that the bottom cannot be seen, consider including in the local SOP that three certified (Professional Association of Diving Instructors or National Association of Underwater Instructors) divers be provided instead of the two lifeguards. Equip boats with life-ring, rope (3/8" or 1/2") and boat hook and position downstream from the crossing site.

c. Make an on-site physical reconnaissance before amphibious operations to determine suitable entrances and exits, maximum allowable water current velocity for the operation, stream bed conditions, and depths for vehicle swimming/fording procedures. Evaluate vehicle characteristics/limitations for entering/leaving the water, degree of embankment slope, and speed of vehicle for safety considerations. Additional procedures relating to amphibious operations are as follows:

(1) Insure that entrances; lanes, and exits are properly marked with flags, engineer tape, poles, or luminous markers. Use easily identifiable floating objects to mark crossing lanes.

(2) Set up stringent controls for crossings during periods of reduced visibility, including blackout conditions, to prevent over concentration of vehicles at entrances and exits. Supply directional lights on the shore to prevent driver disorientation. Have emergency lighting such as a tank spotlight or position enough vehicles with headlights beamed on the water surface for contingencies.

(3) Select an assembly area to check equipment and conduct pre-crossing checks before any vehicle enters the waters.

(4) Designate a crossing control officer with basic qualifications in local SOP to aid the commander in the orderly movement of vehicles. Each crossing unit will keep contact with the control officer.

(5) Brief all personnel on emergency evacuation procedures and proper weight distribution. Rehearse

5-23. Vehicle Swimming/Fording Operations

these procedures before entry into the water until all individuals are thoroughly skilled.

(6) Supply all personnel with life preservers prechecked for serviceability by vehicle commanders before the operation. Personnel will wear life preservers at all times while the vehicle is underway in the water. Inflatable life preservers will not be inflated while personnel are inside the vehicle.

(7) Insure that personnel do not wear web gear, LBE or overshoes while the vehicle is in the water.

(8) Attach tow cables across the tops of vehicles. Attach a rope strong enough to raise the tow cable in case the vehicle submerges, and at least 50 percent longer than the maximum water depth. Attach a suitable lightweight floating device (capable of raising the rope to the water surface) to the free end of the rope to serve as a buoy marker of a sunken vehicle.

(9) Position qualified personnel and adequate equipment near the crossing site to assist in recovering stalled or sunken vehicles.

(10) If a vehicle is completely immobilized and not sinking, place the controls in neutral, climb out from the vehicle, stay on top with life preservers inflated, and await rescue. The crew should immediately evacuate a sinking vehicle.

(11) If a vehicle is to swim a body of water during an exercise, "predip" if not more than 72 hours before the exercise. If any maintenance/repair procedure is performed on any portion of the vehicle which provides floatation/water tight integrity, repeat the "predip."

d. The OIC should ensure non-swimmers are identified.

e. Combat lifesavers will be present.

5-24. FOOT MARCHES. Units may conduct foot marches and ambushes in the tactical training areas and other areas within the range complex. Requests to conduct road marches and ambushes are annotated on a strip map and submitted to Range Operations for approval NLT 30 days prior to scheduled use. This is utilized to depict the desired route of march, check points, grid coordinates of the ambush sites. The following requirements and restrictions are adhered to for all road marches and ambushes:

a. Units maintain FM communications with Range Operations at all times and call in the times for the start, check and end points.

b. Units will foot march on the shoulder of the road. All personnel stay off the paved road so as not to interfere with traffic.

c. Units conducting ambushes or other training that utilizes pyrotechnics and smoke provide an eight-digit grid of the site and indicate on an overlay the intended date and time of use in support of training.

5-25. BULK FUEL OPERATIONS. Contact Range Operations (building 110, ext. 2-4848/2951) to complete a special site request NLT 30 days prior to establishing a fuel farm/bulk POL distribution point. Due to fire and safety considerations, no POL bulk storage and distribution points will be established within the cantonment area. The site shall be clear and nearly level to prevent excessive clearing of vegetation. Berms must be constructed around the bladders to contain major spills and prevent shifting of the fuel bladders. For additional guidance to ensure proper freeboard, size and dimensions of the berms, refer to the Environmental and Natural Resources Customer Support Package available at Range Division, building 110.

5-26. FIRE DANGER.

a. Range Operations receives updates from the Fire Department for the fire code as it changes. During the summer months OICs should ensure they are aware of the current fire code before beginning training.

b. The fire codes and meanings are included in chapter 13, paragraph 13-7.

5-27. NONSTANDARD TRAINING.

a. Modifications affecting troop limits, danger areas, restricted areas, roadblocks, firing areas, safety limits, or physical changes to facilities will not be made without approval of the Chief, Range Operations. Requests for modifications will be received by Range Operations at least thirty (30) days prior to use.

b. Non-standard training events must be coordinated with Range Operations by memorandum. Details of the operation, safety plan and risk assessment must be included with the memorandum. Non-standard events are any events not listed as standard for a range, training area or training facility in appendix C

of this regulation. This memorandum must be received by Range Operations NLT 30 days prior to the planned training.

5-28. DIGGING.

- a. Units will submit a special site request for all digging done outside of the earth moving sites.
- b. Units damaging utilities while digging without a special site request may be liable for the cost of damages incurred.

5-29. SPECTATORS, MEDIA AND FAMILY MEMBERS.

- a. Requests for spectators, media and/or family members on ranges and training facilities must be coordinated with the Public Affairs Officer (PAO) and Range Operations. These requests will be submitted in writing to the Chief, Range Operations, NLT 30 days prior to requested event.
- b. Spectators at training events must be controlled by the OIC. The OIC will ensure that all spectators receive a range safety brief, are kept clear of hazardous areas, and are wearing the proper hearing protection and any other protective devices required by the training being observed.
- c. Transportation of civilian and military personnel is the responsibility of the requesting unit. Privately owned vehicles (POV's) are not authorized on ranges or training facilities.

CHAPTER 6

TRAINING ACCIDENTS/INCIDENTS

6-1. GENERAL. Although precautions are taken by both Range Division and utilizing units, unpredicted events can occur. This appendix addresses the areas of ammunition/weapon malfunctions, personnel injuries and illnesses, fires, erratic round procedures, environmental spills and radiation. Some incidents may involve one or more of these areas.

6-2. ACCIDENTS.

a. Reporting

(1) Prompt reporting is essential to accident prevention efforts for the following reasons:

(a) Some types of accidents must be reported to higher headquarters or other national agencies, even if the accident outcome is not severe.

(b) Prompt reporting permits timely investigation. Investigations can be completed before physical evidence of the accident's cause is destroyed.

(c) Early indication of similar unsafe conditions or acts can be achieved.

(2) Accidents are classified according to the degree of injury suffered or the monetary value of the equipment or facility damaged. A partial definition of accident classes is listed below.

(a) Class A accident - accident that results in the loss of life or a permanent total disability.

(b) Class B accident - accident that results in a partial disability.

(c) Class C accident - accident results in a lost time injury.

(d) Class D accident - accident results in a first aid injury.

(3) When notified of an accident, Safety Office personnel will determine a preliminary classification. Accident responses required in paragraph 2-4 below will be based on this preliminary classification.

b. Procedures.

(1) Class A or B accidents will be formally investigated by a team from the Army Safety Center, USARC, or, as directed by USARC, by personnel from the Fort McCoy Safety Office.

(2) Commanders of units training at Fort McCoy, or their designated representative, will investigate unit accidents and prepare a DA Form 285-AB-R (AGAR) for each Class C and D accident involving injury to soldiers or damage to material or facilities. An AGAR should be provided to the Fort McCoy Safety Office within one working day of the accident, but no later than the day the unit departs the installation.

(3) Commanders and supervisors of soldiers assigned to Fort McCoy or other activities will report accidents involving unit and organizational personnel using the AGAR.

(4) DPS personnel will secure the scene of Class A and B accidents to ensure evidence needed by the accident investigation board remains undisturbed. Accident victims who need medical treatment will, of course, be evacuated. In the case of Class C and D accidents, unit or range control personnel will ensure accident scenes are undisturbed until Safety Office personnel release the scene.

(5) When requested, Safety Office personnel will assist units in conducting an investigation, reporting accidents through the appropriate chain of command, and ensuring that accident reports accurately describe the sequence of events, accident cause, and corrective measures.

c. Actions to be taken in case of accident.

(1) Step 1: Assist the injured. If medical help is needed call Range Control to request emergency medical treatment (EMT) support.

(2) Step 2: Isolate and secure the accident scene. Prevent indiscriminate entry by casual on-lookers. Control traffic. Request DPS assistance as needed.

(3) Step 3: Notify Range Operations of the accident.

6-2. AMMUNITION/WEAPON MALFUNCTIONS.

a. Ammo malfunctions for all firing weapons must be handled by the Installation QASAS/ASP.

b. The OIC will follow these additional procedures:

(1) When malfunctions or accidents involving weapons or munitions occur the OIC:

(a) Places the range in a cease fire status.

(b) Reports the incident to Range Control.

1. Location

2. What took place

3. Requests medical support if necessary.
INJURED PERSONNEL SHOULD NOT BE MOVED, UNLESS TO AVOID FURTHER INJURY, UNTIL MEDICAL ASSISTANCE ARRIVES.

4. Requests other agencies if necessary (e.g. Fire Department, EOD).

(c) Preserves the scene as close as possible.

1. Weapons and equipment remain as is.

2. Weapons are rendered safe without unnecessary tampering.

3. Ammunition is rendered safe without unnecessary tampering.

4. Personnel are kept clear of the scene.

(d) Completes and turns in a Training Accident/Incident Report at Range Operations, building 110.

(e) For incidents caused by a malfunctioning ammunition item, the OIC will complete DA Form 4379 (4379-1 for missiles) Ammunition Malfunction Report. Copies of this report can be obtained from the ASP.

(2) For ammunition malfunctions that result in damage to weapons or injury to personnel, it is critical to secure the accident scene. Except for life saving efforts, everything should be left as is. An investigation team consisting of representatives from the Post Safety Office, Ammunition Surveillance Office (QASAS), Range Safety Office, and EOD will assume control of the accident site upon their arrival.

(3) All personnel who witnessed the event, if not injured, will remain in place until Fort McCoy Safety Personnel Arrive. These include but are not limited to the OIC, Safety Officer, NCOIC, Assistant Safety Officers and QASAS.

d. The Unit OICs will submit an accident/incident report to Range Operations. The report must include:

(1) Weapon system/ammunition

(2) Lot/Serial numbers involved

(3) Charge if applicable

(4) Quadrant elevation if applicable

(5) Time setting for fuzes

(6) Corrective action taken by unit

6-3. PERSONNEL INJURIES AND ILLNESS.

When an accident involving injury occurs on the range complex, the OIC notifies Range Operations and requests medical support per chapter 4 of this regulation.

6-4. FIRES.

a. When fires start on the range complex the OIC reports the fire to Range Operations. This report should include:

(1) Location of the fire.

(2) Extent of the fire.

(3) Actions taken by the unit.

b. The OIC completes and turns in a Training Accident/Incident Report (appendix G to this regulation) to Range Operations.

6-5. ERRATIC ROUND PROCEDURES.

a. Erratic rounds landing outside of the impact area are defined as any projectile that lands outside of the safety limits of the firing unit. Erratic rounds are normally from artillery or mortars but can occur with any weapon.

b. Anyone observing an erratic round reports the incident to Range Operations with the following information:

(1) Name, grade and unit of person reporting.

- (2) Location of the observer.
- (3) Injury to personnel or equipment if any.
- (4) Date/time the erratic round was observed.
- (5) Number of rounds observed.
- (6) If artillery/mortars, location of burst. Was the burst ground or air? What's the height of burst if air?
- (7) Origin of erratic round if known.

c. After getting an erratic round report Range Operations will announce *CEASE FIRE FREEZE, CEASE FIRE FREEZE, THIS IS FORT McCOY RANGE CONTROL CEASE FIRE FREEZE*. All units acknowledge the call with the firing facility number and initials of the RTO receiving the call.

d. All units immediately come to a cease-fire. All weapons and equipment are not to be touched except to render them safe and all personnel move to the rear of their weapons. Artillery/mortars must report any rounds in hot tubes to Range Operations. Range Operations will then determine what the unit can do.

e. Range Operations will then allow selected ranges to resume firing based on the erratic round report.

f. All FDCs prepare to send the following information when requested by Range Operations:

- (1) Time of last round fired.
- (2) Azimuth of fire.
- (3) Deflection fired.
- (4) Charge used.
- (5) Caliber and type of weapon fired.
- (6) Type of fuze fired.
- (7) Time set on time fuzes.
- (8) Charge used.
- (9) Target location.

g. The battalion commander of the responsible unit will be notified by Range Operations. The battalion commander should initiate an investigation. The Director, Directorate of Training and Mobilization or the Fort McCoy Range Officer will determine if further action is required.

6-6. ENVIRONMENTAL SPILLS.

a. If a POL spill of one gallon or more occurs immediately report size, location and type of POL spill to the Range Operations (46.80 MHz FM radio or ext. 2-4848). Take immediate action to control, contain and clean up the spill, if safety permits. Range Operations will notify the Fire Department and the Environmental Division. These organizations will come to the site and direct the unit on what steps to take for the spill.

b. Individual units are responsible for cleaning up spills less than one gallon by placing contaminated soil in a double-lined plastic bag. The unit shall then notify Range Operations or the Environmental Division (ED), ext. 2-160/2363, with details of the spill (unit, time, location, and product) and for additional disposal instructions. ED hours of operation are 0700 - 1630, Monday thru Friday, or by special appointment.

c. Drip pans and drums for disposal of waste fuels, solvents, oils, antifreeze, etc. are available through Troop Unit Support, building 2569, ext. 2-3800.

d. Units remain at the spill site until cleared by the Environmental Division, Fire Department or Range Control.

e. The OIC completes and turns in the Training Accident/Incident Report, appendix G to this regulation to Range Operations.

6-7. RADIATION.

a. Because the Army's new NBC equipment, artillery collimeters and other items contain radiation, there is a need to report radiation incidents. Whenever one of these items is missing or broken, the unit contacts Range Control.

b. Units using equipment containing radioactive material shall provide Fort McCoy Fire Department, Environmental Division and Radiation Protection Officer, located at the Installation Safety Office copies of Material Safety Data Sheets (MSDS) in advance of training. The Radiation Protection Officer will be the lead person in these instances.

CHAPTER 7 AMMUNITION

7-1. GENERAL.

a. Care will be taken to limit exposure to a minimum number of personnel for the minimum time, to a minimum amount of hazardous material consistent with safe and efficient operations. This is the **Explosive Safety Cardinal Rule** and upon this, all explosive safety rules have been based.

b. Alteration or modification of any ammunition or explosive item is not authorized on Fort McCoy without authorization IAW AR 385-63, chapter 3, paragraph 3-2a.

c. Any unusual conditions not covered by this regulation, or when ammunition and explosives (A&E) are determined to be dangerous to handle or store will be reported to Range Division. Operations should be suspended and if warranted, personnel should be evacuated.

d. Personnel working with A&E will be trained in the tasks to be performed. They must understand the hazards, standards, procedures, and precautions that apply to their operation.

7-2. FIRE PREVENTION, PROTECTION, AND SUPPRESSION.

a. There is no smoking within 50 feet of any ammunition. At least one fire extinguisher with a 1A or greater rating will be provided at each designated smoking area.

b. A "No Smoking" sign will be posted at each entrance to an explosive storage area.

c. Smoking is prohibited in, on, or within 50 feet of any motor vehicle or trailer loaded with A&E.

d. A&E placed on the ground will have a five foot (minimum) area cleared of all combustible materials. At least two serviceable fire extinguishers must be readily available.

e. Vehicle refueling will be conducted at least 100 feet from any A&E location. Fuel service vehicles

will be parked no closer than 250 feet from any A&E location or operation.

f. Vehicles will not be parked closer than 100 feet from A&E.

g. Empty boxes, dunnage, and combustible packing material will be separated from A&E (minimum 25 feet).

h. A&E laden vehicles will not be refueled until the engine has been allowed to cool for at least 10 minutes.

7-3. STORAGE, HANDLING, AND SECURITY.

a. Storage, handling, and security of ammunition are conducted IAW AR 190-11, AR 385-63, DA Pam 385-64, Fort. McCoy Ammunition Supply Point (ASP) External SOP, this regulation, and the appropriate FM/TM for each weapon system.

b. Ammunition WILL NOT be left unattended. A guard is required for all ammunition during training. An armed guard, qualified with his/her weapon within the previous twelve months, is required for CAT I and II ammunition during training. The armed guard will be briefed on deadly force. CAT I and II ammunition consists of items such as, AT-4s, Dragons, fragmentation grenades and most demolition items. A complete list is found in the Fort McCoy ASP External SOP, encl. 4, and page 15.

c. Once units draw A&E from the ASP they are responsible for protecting those assets IAW all applicable regulations. Storage of A&E prior, during, and after training will be IAW DA Pam 385-64 and this regulation. Storage of A&E outside the ASP is authorized when stored:

(1) At the range or range facility being utilized and with at least two personnel and one NCO, E-6 or above.

(2) At a properly sited and licensed explosive storage location.

d. Range Operations will be notified of storage location and type of A&E. Units will establish and maintain communications with Range Control.

e. Ammunition will be stored on level well-drained ground. Dunnage will be used to provide at least three inches of air space between the ground and A&E. A&E stacks will be covered with a waterproof fire resistant tarp.

f. Ammunition should not be exposed unnecessarily to direct sunlight.

g. Ammunition may be stored in the unit's vehicles or trailers. Personnel are not allowed to sleep within Interline distance from A&E laden vehicles or A&E stored on the ground. This distance will vary according to QD tables listed in DA Pam 385-64 but will never be less than 50 feet.

h. Do not unpack any more A&E than necessary for immediate mission requirements. Save all packing material so that A&E may be repacked prior to return to the ASP. Ammunition returned to the ASP without proper packing may be credited as UNSERVICEABLE.

i. Ammunition lot integrity will be maintained at all times.

7-4. POSITIONING AND ISSUANCE.

a. All ammunition is to remain outside of back-blast areas. Ammunition will be stored in the ammunition shed on ranges equipped with one.

b. Ammunition is issued to firing personnel immediately before conducting firing exercises.

c. The unpacking of ammunition at the firing line is limited to the least number of rounds that permits efficient firing of the exercise.

7-5. TRANSPORTATION OF AMMUNITION AND EXPLOSIVES.

a. Before transporting ammunition on Fort McCoy, unit personnel must attend the Hazmat Safety Course given by the Fort McCoy TMP (or other recognized course). Additional Hazmat requirements are listed in the Fort McCoy ASP External SOP.

b. Containers will not be tumbled, dragged, thrown, dropped on each other, rolled, walked over/on or dropped/thrown from the cargo bed of the vehicle.

c. Ammunition will be blocked and braced during all phases of transportation on or off the ranges to prevent damage to the ammunition or the vehicle.

d. Trash or other extraneous materials will not be transported with live ammunition.

e. ASP personnel inspect vehicles and a DD Form 626 is issued for vehicles meeting the safety requirements.

f. Vehicles will have placards with the appropriate warning signs. These placards must stay on the vehicle while A&E remains.

g. An ammunition/hazardous cargo route is utilized on Fort McCoy. A map of the route to be used will be provided at the ASP. All transportation of A&E on Fort McCoy must use this route. **EXPLOSIVE-LADEN VEHICLES ARE PROHIBITED IN THE CANTONEMENT AREA.**

h. Ammunition, pyrotechnics or explosives may not be transported by POV.

i. Personnel are not allowed to ride in the beds of vehicles transporting ammunition.

j. Smoking is prohibited in or around explosive-laden vehicles.

7-6. AMMUNITION RESTRICTIONS.

a. Improved Conventional Munitions (ICM) are prohibited on Fort McCoy.

b. Blank ammunition is not fired at personnel closer than 25 meters. All rounds of blank ammunition must be checked to insure no live rounds are issued.

c. Blank ammunition is not fired without a blank adapter.

d. Blank ammunition will not be stored in same location with tactical (non-blank) ammunition.

e. Units are NOT authorized to pull tracer rounds from functionally linked ammunition without approval from Range Operations **AND** concurred by the ASP.

WARNING

Removal of supplemental charges greatly increases the possibility of an in-bore detonation if deep-well fuzes are not used.

f. Units should never remove supplemental charges from rounds utilizing short-well fuzes. Rounds configured with short-well fuzes and supplemental charges removed will result in a dud.

7-7. MISSING AMMUNITION. If units discover missing ammunition or weapons they must notify

Range Operations immediately. Range Operations will notify the DPS, Director DTM and the Installation Command Group.

CHAPTER 8 INDIRECT FIRE WEAPON SYSTEMS

8-1. GENERAL.

a. Indirect firing units will utilize standard surveyed firing points. Paladin and MLRS units may fire from within approved firing areas. PADS-equipped units may utilize other areas within the Fort McCoy training complex with the approval of Range Control. All other requests for non-standard firing positions will be taken on a case-by-case basis.

b. Units desiring to utilize non-standard firing positions will submit an Indirect Fire Safety Card/Diagram, appendix G, to Range Operations for approval NLT 30 days prior to the training event.

8-2. COMMAND SAFETY CERTIFICATION.

a. Unit commanders must set up a safety certification training program within their own unit IAW AR 385-63 and the regulations and/or the FMs/TMs for their weapon systems.

b. Units will submit to Range Operations a roster of safety-certified unit personnel, with the date of certification, name, rank, SSN, and weapon system signed by the unit commander, O-5 or above (appendix F).

c. Safety certification rosters are good for one year from date of certification.

d. Commanders may also include the Laser Safety Certification, cited in chapter 10, on the Safety Certification Roster or submit a separate roster.

8-3. INDIRECT FIRE SAFETY BRIEFING.

OICs/RSOs will ensure that a safety briefing is given that includes, in addition to the standard briefing, the following:

a. Limits of Danger Area E.

b. Steps to take in the event of an ammunition mishap.

c. Dangers of ammunition tampering.

d. Minimum uniform requirements around firing weapon systems.

e. Procedures when receiving the command "CEASE FIRE FREEZE."

f. Handling and firing ammunition.

g. Proper ammunition storage.

h. Designated smoking area.

8-4. DECLINATION.

a. Units firing indirect fire on Fort McCoy will use declinated aiming circles and compasses. Declination will be accomplished within the 48 hours prior to the first date of occupation and redeclinated when requirements dictate.

b. There are four declination stations on Fort McCoy (appendix F). Data for these stations is contained in the Fort McCoy Trig List that can be obtained at Range Operations.

c. Procedures for declination are posted at each site.

d. The OIC and Safety Officer will be de-certified for failure to utilize declinated equipment.

8-5. LAY OF THE UNIT.

a. Units will lay with a declinated aiming circle.

b. A separate declinated aiming circle will be utilized for safety. The safety circle will be set up a minimum of 10 meters from the primary means of lay.

c. When the lay circle is set up using surveyed data, the safety circle is set up magnetically. The lay of the pieces must check +/- 10 mils of the safety circle deflection.

d. When the lay circle is set up magnetically, the safety circle is set up magnetically. The lay of the pieces must check +/- 3 mils of the safety circle deflection.

e. The tolerance between safety circle and gun/tube must be +/- 2 mils.

f. The azimuth of fire for each howitzer/tube must be verified by means of a properly declinated compass.

g. Before 1st round, failure to use two circles will cause the unit to be put in a cease-fire status until the problem is corrected. If the unit has been firing without two circles, the OIC and Safety Officer will be de-certified by Range Division. A new OIC and Safety Officer along with correction of the problem is required should the unit desire to resume firing.

h. Units may lay by declinated compass; however, before firing a declinated aiming circle will be used to lay the guns/tubes and the unit will use a safety circle to verify lay.

i. Units desiring to utilize another means of lay to fire will submit an exception to policy request with supporting documentation to Range Operations NLT 30 days prior to the date of training.

8-6. BORESIGHT.

a. Units will boresight according to the FM/TMs for the weapon system utilized.

b. Guns/tubes that cannot be properly boresighted will not be fired.

8-7. SAFETY DIAGRAMS.

a. Installation safety diagrams are available for units utilizing established firing points.

b. Units may construct a non-standard safety diagram from either established or non-standard firing points. Units desiring to establish a non-standard safety diagram will submit the safety diagram to Range Operations for approval for each type weapon, type ammunition and firing point used by the unit NLT 30 days prior to the training date.

c. Safety diagrams are reusable for one year from date of approval.

d. Units will utilize the format in appendix G, Forms.

e. The safety diagram includes at a minimum:

- (1) Unit designation.
- (2) Type weapon system.
- (3) Type ammunition.

(4) Fuze, powder and charge.

(5) Grid for battery/platoon center.

(6) Diagram.

(7) Maximum and minimum ranges to include doglegs.

(8) Left and right azimuths to include doglegs.

(9) Maximum ordinate in feet.

(10) Azimuth of fire.

f. Units may design their safety diagram as they desire, but all points will fall in the designated impact area.

g. If approved, safety diagrams are given a control number by Range Operations. The unit reports this control number in its request for a wet time.

h. Safety diagrams will be posted on the forward observer's map, the unit's safety chart for manual computing and/or the operations map for computer operations.

8-8. INDIRECT FIRE OIC/SAFETY OFFICER CHECKLIST. An Indirect Fire OIC/Safety Officer Checklist is provided in appendix H. The checklist is completed prior to firing and is subject to inspection by Range Division personnel.

8-9. AMMUNITION.

a. Strict adherence to directives in FM 6-50, FM 23-90, TM 43-0001-28, AR 385-62, AR 385-63, and the appropriate weapons operator's manual will be applied at firing positions.

b. Unless approved by Range Division, only ammunition approved for overhead fire is used on Fort McCoy.

c. The firing of a round without a fuze is prohibited.

d. Ammunition is stored IAW unit SOP, but must be stored in a manner that meets the minimum requirements in Chapter 7.

e. Fuzes are seated with the correct fuze wrench only.

f. Ammunition and/or residue powder increments will not be left unattended.

g. Charges will not be pre-cut.

h. Time fuzes will not be preset unless the ASP issues time fuzes in lieu of PD. The commander may then authorize time fuzes to be preset to PD action.

i. Ammunition Restrictions:

(1) White phosphorus ammunition is restricted to the certain areas. An overlay showing these areas can be picked up at Range Operations.

(2) Improved Conventional Munitions (ICM) are prohibited on Fort McCoy.

(3) Copperhead ammunition may be fired with the approval of Range Operations.

(4) MLRS short-range practice round may be fired with approval of Range Operations.

(5) All parts of illumination rounds must impact in the impact area.

j. More information about ammunition is contained in chapter 7.

8-10. ERRATIC ROUND PROCEDURES. Erratic round procedures are contained in chapter 6.

8-11. POWDER.

a. Excess powder increments are stored and marked distinctively to prevent accidental igniting of the powder.

b. Excess powder is burned on the firing point in an area cleared of all flammable material.

c. Fire extinguishers, shovels and unit fire fighting personnel must be present when burning powder.

d. Gasoline, kerosene or other fuels are not used to aid either the ignition or the burning of powder.

e. Powder is burned by a detail of at least two personnel. Personnel remain in the area until all flammable material is extinguished.

f. Permission to burn powder must be requested from Range Operations when the fire restriction is moderate or high.

g. Once powder burning is completed, the unit notifies Range Operations that it is completed and all flammable material is extinguished.

8-12. CEASE-FIRE FREEZE. When an erratic round is observed Range Operations will call a CEASE-FIRE FREEZE over radio nets. For actions of the unit refer to chapter 6.

8-13. OBSERVATION.

a. All observation points must be occupied like any training facility. The OIC must be an E-6 or above. If lasers are used a Laser Safety Officer, E-7 or above, must be present.

b. The observation point will have the safety diagram for the unit firing plotted on the forward observer's map and must ensure all targets fall within the safety fan.

c. Communication must be maintained with Range Operations at all times. When communication is lost, the forward observer must cease firing until communication is reestablished.

d. ALL indirect rounds must be observed safe in the impact area. The OP will call Range Operations and report the first round fired "observed safe." If any round is unobserved by the OP, the unit fires a check round at the same data to ascertain if the first round was a dud. If the second round is not observed, the unit must go to a cease-fire status and call Range Operations. Range Operations will then decide if erratic round procedures will be initiated.

e. A restricted fire area is established for 300 meters on either side of the La Crosse River within the impact area. Units may not target in this area. However, because of OP corrections rounds may plot in this area. Units may fire rounds plotted in the restricted fire area that, because of FDC corrections, will land outside the area. OPs will indicated on the clearance sheet the number and locations of rounds that accidentally impact in the restricted fire area.

8-14. PALADIN PROCEDURES.

a. General.

(1) Paladin units will schedule and train in established Firing Areas (FA) specifically developed for their tactics. Standard Firing Points (FP) should not be scheduled or used when maneuvering or firing using these tactics.

(2) Command safety certified personnel must be certified IAW this regulation, FM 6-40, FM 6-50, and TM 9-2350-314-10. Safety certified personnel in Paladin units must be recorded as being certified on the Paladin weapon system for Fort McCoy Range Operations and Range Safety purposes.

b. Paladin Firing Areas (FAs).

(1) The firing areas consist of any number of training areas large enough for a battery to maneuver in. Although there are standard FPs in these areas units are not required to fire from them. We encourage firing from any place suitable to facilitate tactical training with restrictions being found in each FA range packet.

(2) Danger area E must be checked by a safety-certified individual prior to any firing. Danger area E is 350 meters.

8-15. MULTIPLE LAUNCH ROCKET SYSTEM (MLRS) PROCEDURES.

a. General.

(1) MLRS units will schedule and train in established Firing Areas (FA) specifically developed for their tactics. Standard Firing Points (FP) should not be scheduled or used when maneuvering or firing using these tactics.

(2) Command safety-certified personnel must be certified IAW this regulation, FM 6-60, and TM 9-1425-646-10-1 and -2. Safety-certified personnel in MLRS units must be recorded as being certified on the MLRS weapon system for Fort McCoy Range Operations and Range Safety purposes.

b. MLRS Firing Areas.

(1) When firing the MLRS at Fort McCoy unit personnel are required to emplace barriers and man appropriate ones that encompass the exclusion zone. The Range Safety Officer, based upon the type of safety being used and the exact location of the firing piece, dictates the locations of these barriers. Prior coordination, NLT 30 days, with Range Safety must be accomplished to determine this information. Fort McCoy provides all barriers.

(2) Units are required to provide Range Operations the route for any calibration runs in the form of an overlay.

(3) The firing areas consist of any number of training areas large enough for a battery to maneuver in. Firing Area 02 MLRS is the only approved MLRS live fire area.

8-16. MANEUVER DAMAGE. Tracked vehicle movement should be limited when driving off of established trails to help limit maneuver damage within each firing area. When driving between FAs, tracked vehicles must stay on established trails.

- (6) Ski Hill.
- (7) Pine View Lake and campground.
- (8) Lake shorelines.
- (9) Two mile radius of VA Hospital in Tomah, WI.
- (10) Lake Tomah in Tomah, WI.

CHAPTER 9 AIRCRAFT OPERATIONS

9-1. GENERAL. All aerial operations must be IAW AR 95-1, Fort McCoy Aviation SOP, FAA regulations, and this regulation.

9-2. RESTRICTED AREA 6901 A/B.

a. Restricted Area R6901A - All installation air space North of Highway 21. When aircraft enter R6901A they must contact Range Operations to receive active range, firing point, firing area and drop zone information. The AMC (Air Mission Commander) must plan routes around active ranges, firing positions, and drop zones. This information is given in ATIS (Air Traffic Information Services) format.

b. Restricted area R6901B - All installation air space South of Highway 21. When aircraft enter R6901B they must contact Fort McCoy Army Airfield to receive active range, firing position, and drop zone information. This information is given in ATIS format. When Fort McCoy Army Airfield Operations is closed, all aircraft must contact Range Operations for required information. If Range Operations, and McCoy Army Airfield Operations are closed, aircraft will follow FAA rules.

9-3. RESTRICTIONS.

a. No fly over areas for all types of aircraft are depicted on the Fort McCoy map. They are:

- (1) The family housing and adjacent training areas.
- (2) The installation ammunition supply point and the field ammunition supply point, when active.
- (3) The cranberry bogs (North of Fort McCoy and one located SE of cantonment area).
- (4) The North Impact area.
- (5) The cantonment area.

b. Aircraft must maintain a 1000-meter horizontal radius from all active firing positions when conducting NOE training. There are six (6) firing areas utilized by Paladin and MLRS units on Fort McCoy. Aircraft will maintain the 1000-meter horizontal radius from the edges of firing area.

c. Altitude restrictions on Fort McCoy:

(1) Fixed Wing: Minimum 500 feet AGL unless cleared for CAS missions.

(2) Rotary Wing:

(a) Tactical flight on Fort McCoy is a Fort McCoy policy. Tactical helicopters are expected to remain at tactical altitude unless mission requirements dictate otherwise. Helicopters will not fly over hot ranges or fly less than 1000 meters from the guns in the gun-target line. When underflying artillery, aircraft will remain at 50 feet AGL or less.

(b) South of Highway 21: Restrictions are Badger DZ and Young Assault Strip when in operation.

(c) No aircraft will be left unattended on the cantonment area helipads (exceptions are Fort McCoy MEDEVAC aircraft).

9-4. FLIGHT ADVISORY REQUIREMENTS.

a. Live-fire Aerial Gunnery operations require flight advisory and radio communications with MPTR OIC.

b. NOE operations allow units to flight follow themselves when two or more aircraft are involved in NOE training. One of the aircraft involved in multiple aircraft flights or single aircraft are required to flight advise with Range Operations or Fort McCoy Army Airfield when operating over installation property.

9-5. COMMUNICATION.

a. Fort McCoy Airfield Tower - 124.6 VHR; 38.50 FM; 229.4 UHF

b. Fort McCoy Range Control:

- (1) Administrative Frequency: 123.45 UHF
- (2) Primary FM: 46.80 FM
- (3) Alternate FM: 41.90 FM

9-6. UTILIZATION OF AIRCRAFT WITHIN FORT McCOY TRAINING AREAS.

a. Aircraft Operations:

(1) Landing zones must be surveyed (IAW AR 95-1) prior to being used and approved by the Chief, Range Operations. Requests for establishment of additional landing zones are forwarded to Chief, Range Operations no later than 45 days prior to requested date of use.

(2) Prior to deploying aircraft within training areas under their control, unit commanders using Army Aviation Support at Fort McCoy must ensure appropriate Army Regulations and procedures are met.

(3) Flights involving three or less aircraft may be conducted within a Range Operations-approved training area without additional coordination.

(4) Flights involving four or more aircraft must be coordinated with Chief, Range Operations for training area landing zones NLT 45 days prior to the desired date.

(5) Aircraft operating within the Fort McCoy Reservation are required to file Flight Plans with appropriate authorities and obtain a Weather Briefing. Flights that will penetrate the Restricted Area must be coordinated prior to the flight and permission received from Chief, Range Division. Aviators must ensure coordination has been effected with Base Operations and tower personnel.

(6) Aircraft operating within the Fort McCoy training areas are required to contact McCoy Tower whenever a flight occurs within the airport traffic area.

(7) Tactical aircraft operations within the Fort McCoy Reservation are conducted under VFR conditions.

(8) Tactical aircraft operations under IFR conditions are prohibited.

(9) Airmobile operations must be coordinated with Range Operations to avoid over burdening units and Range Operations. This will prevent disturbing other units' field training. All PZs and LZs within training areas must be scheduled through the Range Scheduling Office.

(10) Helipads within the cantonment area are not authorized for use as tactical LZ/PZs by order of the Installation Commander. A listing of helipads on Fort McCoy is contained in figure 9-1.

<u>HELIPAD</u>	<u>GRID</u>	<u>AUTHORIZED USE</u>
Helipad #1	XJ 872 763	Passenger/VIP/Delivery /Shuttle
Helipad #2	XJ 855 773	MEDEVAC, Aerial Gunnery Aircraft (Non-Armed), Passenger/VIP/Delivery/Shuttle
Helipad #4	XJ 862 766	Passenger/VIP/Delivery /Shuttle
Helipad #5	XJ 855 767	Passenger/VIP/Delivery/ Shuttle
Helipad #9	XJ 858 754	Passenger/VIP/Delivery/ Shuttle
Helipad #10	XJ 851 775	Aerial Gunnery Aircraft (Non-Armed), Passenger/VIP/Delivery /Shuttle

Figure 9-1

b. Fort McCoy has four (4) Nap of the Earth (NOE) lanes. There is only one lane partially on the installation. To schedule these lanes, contact Fort McCoy Army Airfield (MAAF) by telephone, Coml 608-388-4232/4207 or DSN 280-4232/4207.

c. Night Vision Goggles (NVG). Night vision goggles training can take place over any of the training areas of Fort McCoy. Aircraft commanders must make every effort to avoid flying over units training on the ground.

9-7. SLINGLOAD OPERATIONS. Units conducting slingload operations will schedule sites outside of the cantonment area. Aircraft conducting slingload operations will not flyover buildings.

9-8. ROTARY AERIAL GUNNERY.

a. General. Authorized ammunition is limited to 7.62mm, .50 cal, 40mm TP, 20mm, 30mm, TOW inert and 2.75-inch Rockets: M274, M257 with MK66 rocket motor.

b. OIC.

- (1) Obtains both present and forecasted weather report for the period of firing.
- (2) Obtains range and safety briefing from Range Operations.
- (3) Briefs UT on safety and other range details.
- (4) Verifies that communications are established with Range Control and aircraft.
- (5) Ensures that an UT or qualified pilot is present in each aircraft and that the UT is qualified for the specific aircraft and weapon system involved in the training exercise.
- (6) Supervises flight operations and safety procedures.
- (7) Ensures positive control of all helicopters operating on the range is maintained.
- (8) Keep conspicuously posted the current crash grid map and insures that all personnel are familiar with map.

c. Range Safety Officer (RSO).

- (1) Ensures that Range Control frequency (46.80) and range phone is monitored at all times.
- (2) If a hazardous situation is discovered, the RSO corrects the situation on the spot. If the RSO cannot correct the situation expeditiously, he/she closes down the range operation and reports the situation to the OIC.
- (3) Maintains two-way communication with aircraft on the range at all times.
- (4) Assures that all live ordnance is removed from the aircraft prior to departure from the range complex. This will be accomplished at a designated rearm point.

d. Unit Trainer (UT).

- (1) Directly responsible for the safe firing of all weapons systems on the aircraft.
- (2) Maintains two-way communication with the OIC and/or RSO.

(3) Supervises the preparation, loading and unloading of ordnance, boresighting and stray voltage checks on the weapons systems in accordance with applicable aircraft weapons systems operations instructions. A firing circuit check and stray voltage check is conducted before each arming or rearming.

(4) Ensure that firing is conducted only when the aircraft is on course and the weapon system(s) is aimed at the target.

(5) Permits arming of the weapon system only after:

(a) After verifying position.

(b) The aircraft is oriented down range and meets all limitations for that Aerial Firing Position.

(6) Disarms the firing system when:

(a) Directed by the OIC or RSO.

(b) At the completion of the mission.

(c) Firing could be conducted which would result in rounds impacting outside the target area or limits of fire.

(d) Anytime the command "*CEASE FIRE*" is received from any source.

(7) Assures the weapons systems are disarmed prior to departing each firing range. The UT reports switches cold to the OIC.

(8) Insures that no target is engaged at a distance that will allow ricochets to hit the aircraft. Targets are not engaged closer than 300 meters to the aircraft.

e. Additional Safety Requirements.

(1) Anyone seeing an unsafe act will immediately call a *CEASE-FIRE* and report the act to the OIC or RSO.

(2) All aviators must be thoroughly briefed on the contents of paragraph 1 (Aircraft Emergency/Crash Rescue Plan) of this appendix prior to participating in any aerial gunnery exercises and prior to each flight.

(3) All pilots are responsible for the proper orientation of their aircraft and armament in accordance with applicable TMs and safety procedures during all phases of the exercise.

(4) Aircraft do not enter the range area until cleared first by Range Operations and then by the OIC.

(5) Prior to the first firing run of the day, the OIC has the range complex flight inspected to ensure that no one is down range. Guards are placed on roads leading into the range area, as required by Range Operations, to ensure that no one accidentally enters the range. Anyone spotting any authorized ground vehicles, aircraft or personnel down range or any other hazard immediately calls "*CEASE FIRE*". Upon completion of firing, ensure that there are no fires outside the impact area firebreaks. All fires are reported as to size, direction of movement and location to Range Operations.

(6) Functional checks of weapons systems are not made until specifically approved by the OIC/RSO.

(7) Positive radio communication must be maintained at all times between all aircraft/teams, the OIC and RSO. All participating aircraft (aerial gunnery) monitor Range Operations on the designated range frequency (46.80) at all times. In the event of lost communication firing is suspended immediately and all aircraft down range return to the rearm point. **THE OIC/RSO MUST HAVE POSITIVE CONTROL OVER ALL AIRCRAFT.**

(8) The training aircraft crews of the fire team:

(a) Maintain a formation that permits each pilot to see the aircraft to his/her front.

(b) Maintain the armament switches in a switches/cold status until cleared hot by the OIC.

(9) Aircraft operate only in those sectors of the Impact Area cleared hot by the OIC.

(10) No armed aircraft can operate off the reservation except in the event of an emergency that dictates the most expeditious route to the landing area.

(11) No aircraft can depart the firing range complex until the weapon systems have been cleared and verified as clear by the OIC or RSO.

(12) Armed aircraft must have weapons cleared and on safe before refueling.

(13) In addition to normal refueling procedures, fuel handlers ensure that wing store ground safety pins are installed before refueling aircraft.

f. Armament.

(1) The first action to be taken when an aircraft lands on the rearm line is to safe and clear the weapons. The aircraft are approached from the right or left rear at a 45-degree angle to avoid the front and rear of the weapon systems.

(2) No one walks in front of weapons.

(3) All personnel on the rearm line remove headgear to preclude it from becoming FOD. Hearing protection (flight helmets or ear sound protectors) are worn when aircraft are running.

g. Ammunition Storage and Handling.

(1) The unit's temporary range ammunition storage point is not overflowed at any time. It must be located far enough from the aircraft parking area so that debris from an aircraft accident will not impact in the storage area.

(2) All ammunition is stored on trucks or on dunnage to prevent water damage.

(3) Damaged or dud ammunition is placed in a designated pit on each range. Range Operations is notified for disposition.

h. Aircraft Refueling.

(1) Aircraft refueling is conducted in accordance with FM 10-67-1 and the appropriate operator's manual.

(2) Units may set up temporary refueling points with approval from Range Operations or utilize the FAARP in Tactical Training Area M1.

(3) If a POL spill of **one gallon or more** occurs, immediately report size, location, and type of POL spill to Range Operations (46.80 MHz FM radio or ext. 2-4848) or the Fire Department (Dial 911). Take immediate action to control, contain, and clean up the spill, if safety permits.

(4) Individual units are responsible for cleaning up spills **less than one gallon** by placing contaminated soil in a double lined plastic bag. Unit shall then notify Range Operations with details of the spill (unit, time, location, and product) and for additional disposal instructions.

i. Operation of the Range.

(1) All pilots utilizing this complex must be familiar with the appropriate FMs, TMs for the weapons system being utilized and Fort McCoy MPTR SOP.

(2) Aircraft or teams commence the course only when cleared by OIC and the unit has opened the range with Range Operations.

(3) All aircraft movement within the range complex not on the range proper MUST be closely coordinated with Range Operations to prevent flights into other active range safety zones.

(4) Range Operations is notified when the range is initially occupied and when unit is ready to go wet. The unit OIC then controls aircraft going wet and dry on the range and at individual firing points. Once all firing is complete Range Operations is notified/requested for a dry status.

(5) All training originates/terminates on the designated range.

(6) Firing commences on an aerial firing point when cleared by the OIC; aircraft are placed in switches/hot status only after the target hand off is completed and approved and are placed in a switches/cold status upon completion of the mission. Only those weapons systems listed as approved for the range may be used.

(7) An air crew experiencing misfires, malfunctions or runaway guns:

(a) Reduces air speed and attempts to expend ordnance safely and within range limits.

(b) Keeps the armament system oriented down range.

(c) Immediately places master arm switch in the off position.

(d) Pulls and/or turns off weapon circuit breakers.

(e) Informs the OIC/RSO of the situation.

(f) Proceeds directly to the nearest designated set down area at the lowest altitude possible.

(g) Lands at the set down area with the armament system pointed down range.

(h) Awaits assistance from qualified armament personnel.

j. Aircraft Emergency/Crash Rescue Plan.

(1) The OIC:

(a) Familiarizes unit personnel with the provisions of AR 385-40, this document, related regulations, directives, and pertinent publications.

(b) Maintains a state of constant readiness for an accident. The OIC periodically inspects the emergency equipment and medical personnel.

(c) Ensures that the RSO and other appropriate personnel have maps to be utilized for crash rescue efforts.

(d) Ensures that an aircraft is on station to act as an air ambulance and that at least two trained medical personnel or combat lifesavers are available during all firing.

(2) Aircraft Emergency: Armed helicopters experiencing in-flight emergencies land at the most convenient and suitable landing site within the confines of the range area. Pilots deviate from this procedure only when the nature of the emergency renders field site landing hazardous to the crew and/or aircraft.

(a) In the event that a field site landing cannot be accomplished and the aircraft must return to the range, the pilot-in-command accomplishes the following:

1. Notifies OIC/RSO of the situation.

2. Notifies OIC/RSO that he/she will attempt to expend all ammunition on range targets or, if possible, jettison external ordnance in the authorized jettison area.

3. Ensures weapons systems are in a switches/cold status.

4. The pilot contacts Range Operations and declares a precautionary or emergency landing.

5. If possible the crew should land on an arming pad, keeping the weapon systems pointing down range.

6. When landing with live ordnance, the crew ensures that no one moves or disturbs the aircraft

until all ammunition has been rendered safe or removed by armament personnel.

(b) If aircraft must make a forced landing within the Impact Area, the Aircraft Commander must evaluate the post-crash situation and determine whether the danger of exiting the aircraft into a potentially live dud area outweighs the danger of remaining in the aircraft until Range Division personnel arrive at the scene. The aircraft commander ensures these procedures are understood by all crew members prior to takeoff.

(c) Crash Plan. The aircraft crash plan is put into effect and necessary aid rendered immediately if a helicopter accident occurs.

1. The OIC:

- a. Ceases all operations on the range complex.
- b. Radios crash location to Range Operations for fire fighting, ambulance and rescue crews.
- c. Alerts all traffic to the emergency and grant traffic priority to rescue and search aircraft.
- d. Reports any emergency as soon as possible to Range Control providing as a minimum the information listed below:
 - (1) Location of the accident.
 - (2) Time of the accident.
 - (3) Type of aircraft involved.
 - (4) Injuries to personnel, if any.
 - (5) Other pertinent facts i.e. whether the aircraft is armed or not.
- e. Coordinates with Range Operations on the feasibility of using an organic aircraft as a crash rescue vehicle with unit/post medical personnel on board.

f. Evaluates need for EOD personnel at crash site.

2. Safeguarding Wreckage. Wreckage is not moved except to facilitate removal of injured personnel or to disarm or safe weapons until authorized by the President of the Aircraft Accident Investigation Board.

9-9. HELICOPTER BATTLE POSITIONS. To support single ship helicopter gunnery training, nine (9) single helicopter Aerial Firing Points (AFP) have been developed. Each AFP has special requirements for weapons and movement. The AFPs have controlled air routes so as to minimize range conflicts. The air routes and AFPs must be flown under the tactical flight rules of Fort McCoy Regulation 350-1 (50 ft AGL or less) and Fort McCoy Aerial Gunnery PAM 350-10. Aerial gunnery training is scheduled by Range Operations. Refer to appendix C, Ranges, Training Areas and Facilities, of this regulation for a listing of Aerial Firing Points.

9-10. FIXED WING GUNNERY.

a. Units desiring to conduct fixed wing gunnery on Fort McCoy must submit a listing of the targets being utilized along with a footprint for the aircraft and weapon being utilized as an attachment to the Fort McCoy Form 38A.

b. The tactical range is located in R-6901A, 21NM NW of Volk, on the VOK 290/21. The range is called the North Impact Area, and is triangular shaped. The entire area is surrounded by a fire break approximately 150' wide.

c. Tactical weapons range procedures.

(1) High performance aircraft will not be permitted entrance into Restricted Area R6901A to participate in ordnance delivery without a Forward Air Controller (FAC).

(2) All aircraft will remain outside the R6901A airspace until clearance has been obtained from Fort McCoy Range Operations. West arrivals will rendezvous at the ODI 085/18 (West Salem) and South arrivals will check in with Volk Field. Fighters will orbit these points until clearance has been obtained by the controlling FAC.

(3) Target area is designated as the inner dashed line, on the Fort McCoy 1:50,000 Series V761S map sheet, of the North Impact Area. The FAC may use 2.75-inch WP rockets to mark targets.

(4) Emergency procedures: In the event a weapon's pod is inadvertently released or accidental firing occurs outside the specified target area, all weapons delivery will terminate and Range Operations will be notified with coordinates, type of weapons involved, and type and quantity of ordnance. Aircraft involved will be flown to home base via hot gun routes.

d. The use of R6901B will be coordinated with Fort McCoy Tower (if operational). If the tower is not operational, the FAC will obtain clearance from Fort McCoy Range Operations. No ordnance will be delivered in R6901B.

e. Range FAC responsibilities.

(1) Directly responsible for the operations and safety of the range during fighter strike activities.

(2) Reconnoiter perimeter of the North Impact Area to ensure range is clear.

(3) Ensuring that a visual survey of the target is made prior to commencing activities.

(4) Coordinating entry for participating aircraft into the range area and maintaining contact with Range Operations throughout the mission. Terminating activities if an unsafe situation develops.

(5) Upon completion of training, notify Fort McCoy Range Operations with the amount of ordnance expended, the number/type of aircraft in the flight and the number of sorties.

f. The following restrictions apply to all Fort McCoy high performance aircraft operations:

(1) Do not overfly the Fort McCoy cantonment area.

(2) Do not overfly the ammunition supply point (ASP), POL storage areas or field ammunition supply point. (FASP) (located two kilometers SE of ASP).

(3) Ordnance permitted: 2.75-inch FFAR WP and Lead Head, BDU-33, 30/20mm rounds, 500 lb. MK-82 inert bombs, and flares from SUU-25 dispensers.

(4) Strafing target grid locations (see section 5-7).

(5) North to south headings prohibited when dropping MK-82 inert bombs.

(6) Supersonic flights within R6901 are not authorized.

g. Coordinated Army and Air Force Operations.

(1) Support of Army ground units with Air Force close air support requires a certified FAC working with the maneuver liaison officer and prior coordination with Range Operations.

(2) FAC responsibilities are:

(a) Coordinate directly with the unit liaison officer to plan the training scenario and ensure safety precautions are understood and followed by all participating personnel prior to conducting the exercise.

(b) The operation and safety of the aircraft involved.

(c) Coordinate entry of participating aircraft with artillery fires by maintaining communication with the Army liaison officer at all times.

(d) Maintain contact with Range Operations during the exercise.

(e) Terminate activities if an unsafe situation develops.

(f) Upon completion of the exercise notify Range Operations of amount of ordnance expended, the number/type of aircraft used, and the number of sorties flown.

(3) Army liaison officer responsibilities are:

(a) Coordinate with the FAC prior to the exercise to ensure all participating units follow safety precautions.

(b) Responsible for and maintain centralized control of all artillery units participating in the exercise.

(c) Maintain communications with the FAC and Range Operations at all times. Allow artillery firing on specified targets only when granted clearance from the FAC.

(4) Further considerations. All non-participating units firing into the north impact area must be under check fire while exercise is being conducted. Combined Air Force and Army exercises must be planned in advance to preclude conflicts with non-organic units using ranges on the North Impact Area. Units marking targets will be identified in the scenario provided to Range Operations.

9-11. McCOY ARMY AIRFIELD.

a. McCoy Army Airfield has two (2) runways.

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(1) Runway 01-19, overall 2825 feet x 100 feet with an overrun area of 1375feet x 50 feet.

(2) Runway 11-29, overall 4700 feet x 100 feet.
b. Runway weight limitation is 175,000 pounds.

9-12. YOUNG ASSAULT STRIP.

a. The air assault strip has one (1) runway. The runway is 3,500 feet long and 60 feet wide with 300-foot overruns at each end.

b. Runway weight limitation is 140,000 pounds for single aircraft. The surface is compressed gravel. Combat Control Team (CCT) must be present and inspect runway prior to aircraft landing. CCT will inspect the runway and taxiways before and after use, and give a serviceability update to Range Operations.

c. The strip is off limits to all vehicles.

d. The strip and adjacent berms are off limits to tactical fighting positions (vehicle and individual).

e. There is no lighting equipment available for this site.

f. The strip must be requested through Range Division scheduling, Fort McCoy.

g. DSS will repair any damage to the runway.

CHAPTER 10 LASER OPERATIONS

10-1. GENERAL.

a. Laser systems, except for the inability to penetrate targets, must be treated like direct-fire, line-of-sight weapons.

b. Lasers include:

(1) AN/GVS-5: Laser Infrared Observation Sets (LIOS).

(2) AN/TVQ-2: Ground/Vehicle Laser Locator Designator (G/VLLD).

(3) AN/PAQ-3: Modular Universal Laser Equipment (MULE).

(4) AN/VVG-2: M60A3 Tank Laser Range Finder.

(5) AN/VVG-3: M1 Tank Laser Range Finder.

(6) Attack Helicopter Target Acquisition Designation System (TADS).

(7) Multiple Integrated Laser Engagement System (MILES).

c. A SOP will be written by the unit and staffed for operations involving laser devices. Risk assessments, hazard analyses, and draft operational SOPs will be forwarded to the Fort McCoy Installation Safety Office for review and approval prior to beginning operations on Fort McCoy.

d. Requests to conduct laser operations should be included in the unit's request to RCSB for training facilities. Requests must include type laser to be used and date/time of use. Request for the use of MILES equipment need only state that MILES will be utilized.

10-2. HAZARDS.

a. Lasers that are not eye safe can severely injure the unprotected eyes of individuals who view the laser

beam directly or a beam that has been reflected off a flat mirror-like surface.

b. The hazard of exposure to the skin is small compared to the eyes; however, direct exposure to the skin should be avoided.

c. Optical Devices:

(1) The use of optical devices to observe the target during laser operations is not permitted unless appropriate laser safety filters are placed in the optical system. Utilizing optical devices with laser safety devices should be kept to a minimum.

(2) All eyewear and filters must be marked with their optical density at the specific wavelength for which they are used.

(3) Selection of eye wear and filters must be IAW TB Med 524 for the particular laser system used.

(4) Eye wear and filters must be inspected for scratches, chips and cracks, maintained in a clean condition and replaced when inspections show them to be no longer serviceable.

10-3. SAFETY REQUIREMENTS.

a. Beam Termination. During laser operations, no portion of the laser beam can extend beyond the controlled target area or out of the impact area depending upon the range or type laser being used. Two types of buffer zones ensure the laser beam terminates in the controlled target area: horizontal and vertical buffer zones. Targets must be located where they have a geographical backstop, i.e., a hill or the ground.

b. Buffer Zones:

(1) Horizontal buffer zones extend to the right and left of the target and normally coincide with the right and left limits of the range.

(2) Vertical buffer zones extend down from the horizon. Vertical buffer zones are established IAW chapter 19 of AR 385-63. In those cases where an adequate vertical buffer zone does not exist, but the Nominal Ocular Hazard Distance (NOHD) stays within the impact area, the vertical buffer is the top of any approved target falling within the right and left limits of the range.

c. Training filters reduce the NOHD and greatly improve system safety; however, they do not render the laser eye safe. These filters may also reduce the

engagement range of the system but should be used to the fullest extent possible.

d. Eye Safe Laser Filter (ESLF) devices for the M1 Tank Laser Ranger Finder, when properly installed, render the laser eye safe; however, direct viewing of the beam should still be avoided.

e. Personnel, such as moving target operators, who must be in the target area, must wear laser protective eyewear with curved lenses during laser operations. Such eyewear must be approved for the specific model of laser device being fired. A laser filter designed for protection against one type of laser may not afford protection from another.

f. Laser devices must not be operated or experimented with when removed from the vehicle, unless specifically authorized by the appropriate maintenance manual.

10-4. OFFICER IN CHARGE (OIC). Each laser range has an OIC (E-6 or above) responsible for all aspects of operations on the range. This individual must be laser safety certified by the unit and a roster of certified laser personnel must be on file with Range Operations before the unit will be allowed to lase.

10-5. LASER RANGE SAFETY OFFICER (LRSO).

a. Each range utilizing lasers must have a LRSO (E-6 or above) responsible for all aspects of safety on the range. This individual must be laser safety certified by the unit and a roster of certified laser safety personnel must be on file with Range Control before the unit will be allowed to fire.

b. The LRSO:

(1) Must be on the range at all times when lasing is being conducted.

(2) Conducts a safety briefing for all personnel on the range, both active participants and other personnel. This briefing includes, but not limited to, an explanation of laser related safety hazards, safety devices, safety procedures and what to do if injured. An example of this safety briefing can be found in Appendix F.

(3) Ensures operators lase only designated targets that diffuse the laser beam (deleted reflectors) and that vertical buffer zones are not exceeded.

(4) Ensures no flat specular (mirror-like) surfaces such as target vehicle windshields or water filled craters are engaged.

(5) Allows no one forward of a laser once the laser exit point is uncovered.

(6) Ensures that lasers are not fired or experimented with outside the range area, the laser exit port is covered with an opaque dust cover and the laser is disabled IAW the appropriate TM/FM governing the weapons system when not in use.

(7) Ensures only approved eyewear is used. LRSOs must report immediately any case of suspected exposure of the eye to laser radiation. The LRSO must inform the individual of the need to perform an eye exam within 24 hours of the overexposure.

10-6. OFF/RANGE TRAVEL.

a. Off-range travel is considered to be travel on other than approved laser range i.e. tank trails, training areas, etc. When traveling off range, laser ports are closed and locked on vehicles so equipped. Ballistic doors/covers are closed on all other vehicles. Off-range travel by M1 tanks is not authorized unless the ESLF device is properly installed. Power to the laser must be turned off.

b. Once a vehicle or laser system arrives at an approved laser range, laser ports remain covered and the power off until the vehicle arrives at the firing line. ESLF devices may be removed on M1 tanks once the vehicle arrives at the range; however, the laser switch safety shield remains in place, the ballistic doors remain closed and the power off until the tank arrives at the firing line. At the completion of firing, laser ports are covered prior to leaving the firing line.

10-7. RANGE OPERATIONS.

a. When opening ranges where lasing is to take place the type of laser is reported along with the other required opening information.

b. LRSO data is reported to Range Operations if different from the Range Safety Officer (RSO).

c. The LRSO and RSO may be the same individual provided he/she meets the criteria for both the weapon system and the laser fired.

d. Laser firing is not permitted when standing water or reflective material is observed within 30 meters of the target area.

e. Prior to lasing:

(1) The OIC must check with Range Operations to ensure there are no restrictions to lasing.

(2) The OIC/LRSO checks to ensure there are no unnecessary/unprotected personnel in the Laser Surface Danger Zone (LSDZ).

(3) The OIC/LRSO must have a copy of the Range Operations approved laser safety fan.

f. During lasing:

(1) Communications must be maintained with the lasing section/vehicle at all times.

(2) Lasing ceases immediately whenever control of the laser beam is lost.

(3) Lasing at any surface at a range of 20 meters or less is not authorized.

(4) Lasers fire only at targets that are diffuse reflectors.

(5) Anyone observing an unsafe act or situation immediately calls for a cease-fire. Lasing does not resume until the LRSO has investigated the situation and declared it safe to lase.

(6) No one is permitted down range, unless on a moving target detail and protected properly, once the laser is on the firing line.

(7) Inclement weather and night operations require no additional safety requirements.

(8) Animals will not be lased.

(9) When moving from one firing point to another, the power to the laser must be turned off and the LRSO informed that the power is off.

g. After completion of lasing the power to the laser is turned off and the covers replaced before leaving the firing line.

10-8. AIRSPACE. When lasing is being conducted, units must ensure that neither the laser beam nor the reflected beam approaches an aircraft. Units must still be aware of all stray aircraft and cease lasing

immediately when an aircraft approaches possible hazardous areas.

10-9. MILES. The MILES laser system is different from the other laser systems in the Appendix. MILES is designed to be fired at another individual and may be used in any training area on Fort McCoy. The system is not considered eye safe within the safety distance or the NOHD as listed below:

TYPE	NOHD W/O OPTICS	NOHD W/ MAGNIFIED OPTICS
M16, M60, .50 Cal	7 METERS	0 METERS
TOW Missile, DRAGON,VULCAN	12 METERS	75 METERS
VIPER, Controller Gun	0 METERS	0 METERS
Tank Main Gun, STINGER	12 METERS	120 METERS

The key to using the MILES system safely on an individual basis is not to fire closer to the target than the safe distance for the blank round of that weapon. The MILES system is not subject to the procedures outlined in this appendix; however, units should ensure all safety precautions prescribed in the appropriate FM/TM are followed, i.e. carrying armed ATWSS cartridges in vehicles is prohibited, etc.

CHAPTER 11 AIRBORNE OPERATIONS

11-1. PERSONNEL AND CONTAINER DROPS.

a. Fort McCoy responsibilities:

(1) All non-aligned aircraft will be cleared off the drop zone (DZ) 10 minutes prior to drop time.

(2) Range Operations will notify the Troop Medical Clinic and MEDEVAC support of all personnel drops. Range Operations will also notify the following when drops of 100 personnel or more are scheduled:

(a) Franciscan Skemp Healthcare, Sparta, WI.

(b) Gunderson Lutheran Medical Center, La Crosse, WI.

(c) Franciscan Skemp Healthcare, La Crosse, WI.

b. DZ descriptions:

(1) Badger Drop Zone is located on South Post. It is the largest of Fort McCoy's DZs at 2425 yards long and 1200 yards wide. The terrain is open, sandy and covered with light grass. It can support personnel and all types of bundle drops.

(2) Warrens Drop Zone is located on North Post. It is 1100 yards long and 765 yards wide. The terrain is lightly grass covered, sand based and is surrounded by trees. There are small berms six to eight feet in height on the east side.

(3) Young Assault Strip, Young Drop Zone is located on South Post. The surface is compressed gravel. Young Drop Zone is for Halo/Free Fall missions.

c. Unit responsibilities:

(1) FM communications will be established with Range Operations one hour prior to the first scheduled drop time.

(2) Coordinate with USAF for Combat Control Team (CCT) when conducting Computed Air Release Point (CARP) drops.

(3) Have a current Drop Zone Survey on site during all airborne operations. Units may coordinate with USAF units to update Drop Zone Surveys per Air Force Instruction 13-217.

(4) Furnish a Drop Zone Safety Officer (DZSO) who meets the qualifications in FM 57-220 paragraph 7-2.

(5) The DZSO is responsible for the Drop Zone Safety Officer party. Each party member must be current IAW FM 57-220 paragraph 7-2. This party is made up of:

(a) The DZSO.

(b) A DZSTL..

(c) A medical coverage team as described in this chapter.

(d) A Parachute Malfunction Officer.

(6) The DZSO will coordinate directly with all units providing the DZSO party. He will also coordinate with the airborne commander and all units jumping. He will receive a complete briefing from the commander concerning type jumps, jump (aircraft) sequence, number of passes, post drop operations, and parachute/heavy equipment recovery procedures.

(7) The DZSO will ensure all personnel and equipment in the DZSO party are present and operational. The entire party will be on the DZ at least one hour prior to the first scheduled drop time.

(8) The DZSO will make a reconnaissance of the drop zone before each drop to ensure there are no safety hazards. A daylight reconnaissance prior to night jumps is recommended. Heavy equipment, Container Delivery System (CDS), and stationary vehicles are not considered safety hazards. All personnel on the drop zone will wear helmets.

(9) The DZSO will close the drop zone only after the entire operation has been completed and a final report has been submitted to Range Operations.

11-2. MEDICAL COVERAGE.

a. Responsibilities: Airborne operations require unique and/or additional medical support on site. On site medical support must be IAW current airborne regulations and doctrine.

b. The senior medic will have his own radio. Senior Medic must have primary MOS of 91B or 18D. The senior medic is responsible to the DZSO for direction and conduct of medical activities on the DZ.

c. All medical personnel will be qualified in MOS 91B, 91C, 91D, or 18D.

11-3. DZO FINAL REPORT. The DZSO will submit a copy of the DZO Final Report to Range Operations when turning in the range packet. A copy of this report is found in Appendix H of this regulation.

CHAPTER 12 VEHICLE OPERATIONS

12-1. GENERAL.

a. Vehicles are prohibited from operating within 50 feet of buildings (unless in a designated parking space/unloading zone) or 200 feet of bivouac sites.

b. Privately owned vehicles (POVs) are prohibited from entering or parking down range.

c. Tracked and wheeled vehicles must utilize existing roads and established tank trails as much as possible to avoid damage to wildlife, vegetation and terrain.

d. All dirt and mud on any hard top road, caused by a crossing, is cleared by the unit (or vehicle) making the crossing.

e. Sleeping directly in front of, behind or under any vehicle is prohibited. If sleeping in or on vehicles, then the engine, heater or other carbon monoxide-producing equipment must be shut off. On combat vehicles all turret power systems must be shut down.

f. Troop safety straps are used when personnel are transported in the cargo bed of vehicles.

g. Vehicles may not move over any firing berm, target berm or protective berm.

h. Slow moving equipment (e.g., front-end loaders, road graders, crawler-type engineer equipment) which will be traveling 25 mph or less will display the Triangular Symbol to alert trailing vehicles as required by the OSH Act (29 CFR 1910.145). Contractor equipment in this category will also use the Triangular Symbol.

i. Vehicles carrying a load which extends beyond the sides or more than four feet beyond the front or rear will have the extremities of the load marked with red flags, not less than 12" square in daytime, and with red lights at night. On unusually long loads

greater than one-third the length of the vehicle cargo bed, check with state or local traffic authorities to determine whether a special permit is required.

j. Drivers of tactical vehicles will keep lights on at all times when on public highways.

k. Heavy winter clothing and field gear worn or carried by drivers and passengers reduces the number of persons that can safely ride in a vehicle cab or driver compartment. (Commanders should be guided accordingly.) Use TB 9-639, Passenger-Carrying Capacity of Tactical and Administrative Vehicles Commonly Used to Transport Personnel for guidance on troop carrying capacities of vehicles.

l. Personnel will not be transported in engineer dump trucks unless an approved positive antidumping device is installed, and a means to ease boarding and off-loading is provided.

12-2. SPEED LIMITS.

a. Wheeled Vehicles (Day)

(1) Hard surfaced roads - as posted.

(2) Improved tank trails - 30 miles per hour.

(3) Unimproved roads and tank trails - 20 miles per hour.

(4) Off road travel - 10 miles per hour.

b. Track Vehicles (Day):

(1) Improved tank trails - 25 miles per hour.

(2) Unimproved roads and tank trails - 20 miles per hour

(3) Off road travel - 10 miles per hour

c. Maximum speed limits for all vehicles utilizing blackout drive are:

(1) Improved tank trails - 15 miles per hour.

(2) Unimproved roads and tank trails - 10 miles per hour.

(3) Off road travel - 5 miles per hour.

12-3. PARKING. Vehicles must be parked only in designated areas.

a. Parking on the tank trail or other roads is prohibited.

b. Parking along the shoulder of the road is prohibited.

c. Ranges:

(1) Vehicles must be parked in the designated parking places. Vehicles will be combat parked.

(2) The OIC ensures there is sufficient room for emergency vehicles to enter the range.

d. Bivouacs: Parking is prohibited within 200 feet of the bivouac site.

e. Tactical Training Areas: There is no POV parking.

12-4. GROUND GUIDES.

a. Ground guides are used anytime drivers cannot clearly see the trail or route to be traveled.

b. Ground guides are mandatory when vehicles enter or move within assembly areas.

c. Backing vehicles:

(1) Ground guides are mandatory when backing vehicles over 1 1/4 ton, all track vehicles and when backing any vehicle at night.

(2) Two ground guides are required when backing tracked vehicles in assembly areas or other congested areas containing personnel, equipment or obstacles.

(3) Wheeled vehicles normally require one ground guide; however, two ground guides are used when visibility is restricted.

d. Prior to starting the vehicle in assembly areas, operators or members of the crew must walk completely around the vehicle and ensure that the vehicle's movement endangers no one.

12-5. CONVOY OPERATIONS.

a. A strip map is turned into Range Operations for approval NLT 48 hours prior to start for each convoy operation/ambush conducted by a unit.

b. Strip maps are necessary for movement of more than three wheeled or two track vehicles. Vehicle convoys must not exceed 10 vehicles.

c. Road guards are posted to inform traffic of the operation when night convoy operations are conducted along a tank trail or other main dirt roads.

d. Units cannot utilize the tank trails for convoy operations or ambush training without a Range Operations-approved strip map. These areas are utilized by both wheeled and tracked vehicles (day and night) and must be carefully controlled by Range Operations for fair use by all units.

12-6. BLACKOUT DRIVE/NIGHT VISION DEVICES (NVDs).

a. Blackout drive convoy operations are conducted only on tank trails or within tactical training areas.

b. Vehicles may not operate without any lights or markers on.

c. Blackout drive training must be annotated on the strip map for convoy operations.

d. Units scheduling areas must annotate on the request the desire to utilize blackout drive or NVDs to aid Scheduling in matching units in areas.

e. Non-tactical vehicles not equipped with blackout drive use parking lights.

f. Personnel operating a motor vehicle while wearing night observation devices (NVDs) will be trained and tested in the use and operation of such devices. This training will be conducted IAW TC 21-305-2 and recorded in the individuals drivers training records.

g. Permanent mounting of cloth or any device over the headlights of tactical vehicles is prohibited. Temporary covers may be used if removed prior to driving on public roads or on military roads frequently accessed by privately owned vehicles.

h. Blackout Drive Hours: Civilian vehicles are prohibited in most training areas after dark. These areas are referred to as Blackout Drive Areas and are OFF LIMITS to civilian vehicles during the following times:

9:00 P.M. - 5:00 A.M.

1 May through 15 September

8:00 P.M. - 5:00 A.M.

16 September through 30 April

Personnel may be allowed into these areas earlier and/or later, if Blackout Drive is not in effect. This

can be checked by calling the GAME LINE at (608) 388-4263. The recording will be updated by 8:00 A.M. each Monday morning and again by 5:00 P.M. each Friday afternoon. The military reserves the right to adjust this if needed. Blackout Drive will be lifted for the Gun-Deer season. The Blackout Drive Area is marked with appropriate signage at entry roads.

12-7. TRACK VEHICLE OPERATIONS.

a. Movement of tracked vehicles is confined to established tank trails, unimproved roads, unimproved tank trails and within tactical training areas. No tracked vehicles may utilize hard surface roads without prior approval from Range Operations. Coordination with the DOD Police must be accomplished for hard surface road travel.

b. Track vehicles operate with the hatches open along tank trails and other main roads.

c. Track vehicles utilizing or entering areas in the vicinity of built up areas, ranges or training facilities must have the hatches open and utilize ground guides until clear of the area. This is done regardless of the training situation.

d. Track vehicles may operate buttoned up along trails within the unit's assigned tactical training area provided both the TC and driver are unmasked. Road guards and/or barriers must be used to ensure that vehicles not involved in the training do not enter the area where tactical driving is taking place.

e. Track vehicles may not operate along the shoulders of hard surface roads.

f. Track vehicles must stop at all road crossings.

g. Road guards must be posted for all crossing operations.

h. Units will utilize the reinforced track crossings.

12-8. BREAKDOWNS.

a. Vehicles that break down must be moved to the shoulder of the road to permit other traffic to pass.

b. If traffic will be obstructed the unit must make provisions to direct traffic safely around the vehicle until the vehicle is on the shoulder of the road or recovered.

c. Vehicles that break down should not be left unattended and unsecured.

d. Drivers must make the necessary provisions to notify their units, return and remain with the vehicle until help arrives.

e. Drivers utilize warning flashers and triangles.

12-9. CROSSING STATE HIGHWAY 21.

a. Units will coordinate for DOD Police support for crossing State Highway 21 under the following conditions:

(1) Any number of track vehicles.

(2) Convoy crossings.

(3) Ammunition vehicles.

b. Units are unauthorized to stop traffic on State Highway 21 unless there is an emergency.

are closed, Drop Zones will remain open for troop and equipment drops.

d. Hunting and fishing will not be permitted in the LRAM areas.

e. Tank trails, and roads around and through LRAM areas will remain open. Vehicles are required to remain on recognized tank trails and roads.

CHAPTER 13 ENVIRONMENTAL PROTECTION AND CONSERVATION

13-1. GENERAL.

a. General environmental protection and conservation are the responsibilities of all personnel utilizing Fort McCoy range complex facilities.

b. The key to preventing environmental damage is to understand that unit actions affect the environment. Individual decisions will either prevent or promote environmental damage. It is therefore imperative that commanders plan their training to minimize damage and are able to respond appropriately to the types of situations that might arise.

13-2. PROCEDURES. This chapter outlines procedures that units should utilize to minimize environmental damage and actions to be taken should problems arise during training. This chapter covers natural resource management, hazardous substance management and fire prevention. Although a part of environmental protection, range sanitation procedures can be found in chapter 16 (Range Sanitation Procedures) of this regulation.

13-3. LAND REHABILITATION AND MAINTENANCE PLAN (LRAM).

a. The Land Rehabilitation and Maintenance Plan is an environmental protection system that has been designated, and is operated by Range Operations. Portions of training areas are set aside for restoration by the ITAM coordinator at Range Operations.

b. LRAM areas will be off limits to all general training activities until full recovery of the site has been determined. LRAM areas will be delineated with signs, tape and an overlay.

c. All artillery firing points will remain open within training areas. While portions of the training areas

13-4. ENVIRONMENTAL FACTORS.

a. An Environmental Impact Statement analyzing the on-going mission of Headquarters, Fort McCoy, has been prepared and approved, effective 3 May 1982. The mission was re-evaluated and updated by an Environmental Assessment in 1998. In addition, Fort McCoy has been included in the preparation of environmental documentation for the fielding of new weapons and support systems such as the M1 tank, graphite smoke generator, M109A6 Paladin, and the MLRS. Units training at Fort McCoy are not required to submit Environmental Assessments (EAs) unless training will encompass activities outside the normal realm of military training. Questions concerning environmental factors can be answered by the Integrated Training Area Management Chief (ITAM) or Chief, Range Operations ext. 2-4792/4629.

b. Activities requiring pre-approval of Range Operations are:

- (1) Laundry Sites.
- (2) Field Shower Sites.
- (3) Bulk POL Storage and Distribution Points (greater than 5000 gal).
- (4) POL Distribution (TPUs)
- (5) Earth Moving (Tank Ditching/Defilades) outside designated Engineer Sites.
- (6) Smoke Generation
- (7) Water Purification Points.
- (8) Vehicle Decontamination Points.
- (9) Abatis/Timber Cutting (30 days prior coordination required).

****NOTE:** These activities must be requested on Fort McCoy Form 38A or special site request. Coordination must be made with Range Operations. A copy of an approved request must be on site during training. For additional guidance, refer to the Environmental and Natural Resources Customer Support Package available at Range Operations, building 110.

c. Endangered Species. The Karner blue butterfly, a federally endangered species, is found on Fort McCoy. There are nine (9) designated endangered species sites that are off-limits to all vehicle maneuvers and digging (foot training is allowed within these areas). The perimeter of each area is marked with diamond-shaped yellow signs. Examples of these signs are at Range Division, building 110.

d. Damage Control. Commanders must consider environmental concerns during all training. Maneuver and training plans must include provisions for protection of known sensitive areas, and for maneuver and training damage repair (i.e., clearing concertina, filling ditches and foxholes, rut repair, trash removal). Training for combat on the modern battlefield cannot be conducted without impact on the environment. Trainers are expected to consider the impact of their events, modify plans to avoid damage that violates Army policy, and ensure that measures are taken to repair unavoidable scenario-driven damage to the maneuver areas.

e. Archaeological/Historical Resources. The goal of the Cultural Resources Program is to identify and preserve the archaeological and cultural resources located within the Military Reservation boundaries. Archaeological and cultural resources include such things as rock shelters, prehistoric stone artifacts, and homestead remains. Many of these resources are fragile and all are irreplaceable. If you encounter archaeological or cultural resources during the course of your training here at Fort McCoy, please notify Range Operations at 388-4505/4848 or at 46.80 MHz.

13-5. NATURAL RESOURCES MANAGEMENT.

a. Destruction. Commanders must ensure that no wanton or deliberate destruction of the natural resources occurs during any training exercises.

b. Vehicles. Vehicles, especially tracked, cause significant damage to natural resources. Careless operation of vehicles damages road shoulders and

drainage ditches and accelerates erosion. Heavy vehicle traffic destroys the ground cover and vegetation that holds the soil in place. Compacted soil reduces the ability of vegetation to survive and ruts can cause run off. Heavily eroded areas may need to be closed to training and rehabilitated. Rehabilitation is time-consuming and costly. For more information concerning vehicle operations refer to chapter 12, Vehicle Operations, of this regulation.

c. Camouflage.

(1) Cutting, nailing, debarking or damaging live trees is not authorized without permission from Fort McCoy Biological and Cultural Resources Management Team (BCRMT).

(2) The use of dead or fallen trees as camouflage is authorized.

d. Water.

(1) Use of water from ponds and streams for washing vehicles and other equipment is not authorized.

(2) Streams and wetland areas can be crossed only at approved crossing sites.

(3) Water crossing operations should be planned and conducted in a manner to keep the environmental impact at a minimum.

e. Excavations.

(1) A Range Operations special site request is required to dig major obstacles on the training complex. Fighting positions, tent ditches and holes for equipment such as generators are generally authorized during training exercises.

(2) All excavations need to be filled in prior to a unit departing and receiving range inspector clearance.

(3) OICs should ensure that when a unit leaves an area without filling in excavations, markers, such as engineer tape, are employed to prevent accidental falling: i.e. a unit has several training areas and is maneuvering through and sets up a defensive position before continuing. This will also make it easier for a unit to return and fill in these excavations prior to clearing.

(4) Units shall inquire with the NCOIC, Range Operations as to current restricted locations concerning threatened and endangered species before submitting requests for digging.

(5) If you encounter anything resembling archaeological artifacts while digging, immediately cease all actions and contact Range Operations at 46.80 MHz or ext. 2-4848/4505.

f. Wildlife. Personnel will neither shoot, nor disturb wildlife except as authorized in current Fort McCoy hunting and trapping regulations.

13-6. HAZARDOUS SUBSTANCES MANAGEMENT.

a. Spills.

(1) Always turn in unused or waste oil and fog oil through the Environmental Division, ext. 2-2160, for recycling along with empty drums and other hazardous wastes, such as old batteries, solvents and paints.

(2) Because of strict Federal and Wisconsin environmental laws, commanders must ensure any spills of the following items are reported immediately to Range Control:

- (a) Oils.
- (b) Brake fluids.
- (c) Fuels.
- (d) Battery acids.
- (e) Antifreeze.
- (f) Paints and paint thinners.
- (g) Grease
- (h) Decontamination agents.
- (i) Pesticides.
- (j) Solvents.
- (k) Hydraulic fluids.
- (l) Any other toxic substance.

b. Reduction of Spills. To ensure an environmentally safe training exercise and minimize the chance of toxic spills commanders should:

(1) Maintain a SOP and have the unit stay familiar with it.

(2) Minimize the use of hazardous substances.

(3) Inspect fueling points and equipment daily to ensure safe operation. Bulk fueling operations require a Range Operations-approved special site request.

(4) Ensure that eye contact with discharge and loading nozzles is maintained at all times during refueling.

(5) Conduct maintenance only in areas where spills can be contained and minimized.

(6) Utilize drip pans on vehicles parked for extended periods of time.

(7) Carry dry absorbent, drums and/or spill kits in case of an accident.

c. Reporting Spills. If a gallon or more of oil, transmission fluid, gasoline, aviation fuel, other hazardous/toxic wastes, etc. is dumped/spilled on the ground, report it to Range Operations immediately and follow the procedures in chapter 6, Training Accidents/Incidents, of this regulation.

d. Batteries. Batteries are considered toxic waste. Commanders should ensure their soldiers do not just throw away batteries. Batteries may be disposed of in the marked containers. Questions can be directed to the Environmental Division, at ext. 2-2160.

13-7. FIRE PREVENTION.

a. Fire Codes

(1) Prior to the use of any fire-producing pyrotechnics, smoke grenades, smoke pots, trip flares, star clusters, tracers, etc., the current fire code must be obtained from Range Operations. Failure to follow the restrictions of the fire code could result in fires, lost training time and unnecessary expenses for the training unit.

(2) Current fire codes on Fort McCoy are indicated in figure 13-1.

b. Open Fires. Open fires are not allowed on

Fort McCoy training complex.

c. Heater Fuel. Commanders will ensure that all heaters are used properly and that only the right fuels are utilized. Gasoline is not authorized as fuel on Fort McCoy. Tents utilizing heaters will be cleared of leaves and other combustible debris.

d. Mess Operations.

(1) Commanders will ensure that:

(a) All brush, grass and any combustible material is scraped and removed a distance of at least three feet from field ranges and immersion heaters.

(b) The fuel supply and filling point are located at least 50 feet from the ignited units.

(c) Personnel utilizing food preparation equipment, field ranges and immersion heaters are properly licensed IAW AR 600-55, chapter 7, para 1a(15).

(2) In extremely dry conditions, the Fire Department may suspend mess operations fires.

e. Catalytic Converters. Military vehicles equipped with catalytic converters must use caution when operating an idling engine in vegetative areas to prevent hot or defective converters from igniting dry vegetation.

f. Field Heaters. For operation of field heaters refer to chapter 15, Safety Precautions, of this regulation.

FIRE DANGER CLASS	RESTRICTIONS NECESSARY TO AVERT SERIOUS VEGETATION FIRES
1 (LOW)	All authorized ammunition, explosives and pyrotechnics will be allowed on live fire ranges and training areas as approved by Range Operations.
2 (MODERATE)	All authorized ammunition, explosives and pyrotechnics will be allowed on live fire ranges and training areas as approved by Range Operations.
3 (HIGH)	<p>a. Pyrotechnics, or other incendiary devices to include explosive simulators, smoke, grenades, flares, etc., will be used in training areas with the approval by Range Operations only.</p> <p>b. No tracer ammunition will be used on South Post ranges.</p> <p>c. Tracer ammunition will be used only on ranges contained by a currently maintained firebreak and pre-burned as approved by Range Operations.</p>
4 (VERY HIGH)	No illumination rounds will be fired.
5 (EXTREME)	Only ball ammunition will be used. No other type of ammunition, pyrotechnic or explosive will be used.

Figure 13-1

CHAPTER 14 NATURAL SAFETY PRECAUTIONS

14-1. ELECTRICAL STORMS. To take precautions against being hit by lightning, a dispersal area must be located on all ranges by the OIC/Safety Officer. When told to disperse all personnel should move to the dispersal area, ground their weapons and helmets and place their ponchos over themselves before squatting on the ground. Dispersal areas should not be located near flagpoles, trees or wires.

14-2. HEAT INJURIES.

a. When you are active in a hot climate with high humidity, the body becomes overheated and perspiration that is created cannot evaporate and cool the body because of the high humidity. You become a possible casualty from the heat as the body temperature rises above normal temperature. The symptoms that this can create are cool, moist or hot, dry skin, profuse sweating, headaches, dizziness, weakness, rapid pulse and/or severe cramps in the abdomen or legs.

(1) Prevention. To prevent heat casualties Commanders:

(a) Monitor the current heat phase category (Fig 14-1) during conduct of strenuous physical activity.

(b) Ensure that subordinate commanders and leaders are notified of changes in the heat alert category.

(c) Train supervisory personnel in the heat casualty prevention procedures as outlined in the heat phase guide.

(d) Allow approximately 14 days of progressive physical acclimatization for newly assigned troops.

b. Training.

(1) Ensure personnel are instructed in the following precautions to prevent heat-related injuries:

(a) Prevention of sunburn:

1 Wear loose-fitting clothing.

2 Use sun protection SPF15 or above on exposed skin; i.e., face, hands, feet.

3 Avoid extended periods of unprotected exposure to the sun.

(b) Prevention of heat cramp, heat exhaustion, and heatstroke:

1 Proper acclimatization (14 days).

2 Adequate water intake.

3 Ensure continual surveillance of all personnel to detect early symptoms of heat illness.

(2) Ensure personnel know how to recognize symptoms of heat illness and how to administer emergency first aid treatment.

(a) Heat cramps:

1 Symptoms. Painful cramps of the muscles of the extremities and abdominal wall.

2 Treatment. Move patient to cool, shaded area. Replace salt lost from the body with saline solution (0.1percent) by mouth, upon recommendation of medical authority.

(b) Heat exhaustion:

1 Symptoms.

a. Profuse sweating.

b. Headache.

c. Tingling sensations in the extremities.

d. Pallor.

e. Nausea and vomiting.

f. Weakness.

g. Rapid pulse.

2 Treatment.

a. Remove victim to cool place.

b. Elevate victim's legs.

(c) Heatstroke: (This is a medical emergency and can be fatal if not treated promptly and correctly.)

1 Symptoms.

a. Stoppage of sweating.

b. Skin flushed, hot, and dry.

c. Headache.

d. Fast pulse.

e. Nausea.

f. Vomiting.

g. Dizziness.

h. Mental confusion.

i. Unconsciousness.

2 Treatment. Cool casualty continuously by:

a. Removing outer garments and/or protective clothing.

b. Immersing casualty's trunk in cool water, be careful not to over cool, thus causing temperature to go to other extreme.

c. Massaging the patient while immersed in cool water to help skin (capillaries) transport cooling effect.

d. Pouring cool water over casualty and fanning to permit the cooling effect of evaporation. Place under cool shower, if possible.

e. Keeping casualty in shade.

f. Using icebags if available at the sides of the neck and underarms during transportation to medical treatment facility to aid and maintain cooling effect.

g. Transporting to medical treatment facility as soon as possible.

h. Medical personnel can determine whether salt treatment is appropriate in the interim.

14-3. COLD WEATHER INJURIES.

a. Range OICs must ensure that warm-up areas are properly utilized. Breaks should be scheduled for each 60-minute block of instruction. During conference sessions, individuals should be allowed to move their feet, hands, etc. to maintain circulation. Adequate dry, loose fitting and layered clothing is the key to prevention of cold weather injuries. Supervisors at every level ensure that their subordinates are adequately protected during cold weather. Range OICs coordinate with personnel to rotate into warm-up facilities when inclement weather conditions dictate the need in order to preserve troop health.

(1) Prevention. To prevent cold weather injuries, Commanders ensure that:

(a) Safety is included in planning and the Wind Chill (Fig 14-2) is monitored at all times.

(b) Suitable cold weather gear is available and serviceable for all troops.

(c) All equipment is ready; i.e., weapons winterized, tent stoves checked.

(d) All supervisors are trained in cold weather responsibilities.

(e) All troops are trained in cold injury prevention procedures, proper cold weather operational procedures, and carbon monoxide hazards.

(f) Monitor current and forecast weather for changes.

(2) Training. Train participating personnel in the recognition of the early warning signs of cold weather injuries and performance of emergency first aid treatment.

(a) Early warning signs:

1 Tingling, stinging, or dull sensation of exposed part followed by numbness.

2 Skin may appear red and then pale or waxy white.

(b) Common injuries:

1 Frostbite - condition results when skin temperature falls below freezing.

2 Immersion foot - condition occurs when feet are wet for 12 hours or more in temperatures below

50 degrees Fahrenheit and when feet get little or no exercise.

3 Trench foot - condition caused by prolonged standing in water or by having wet feet for long periods of time while temperature is just above freezing.

4 Hypothermia - condition caused by exposure to cold and aggravated by wetness, wind, and exhaustion.

(c) Treatment.

1 Remove the individual from the cold.

2 Remove constricting items of clothing (boots, socks or gloves) from injury site. Protect with non-constricting clothing/blankets.

3 Do not apply medications, salves, or ointments.

4 Do not allow patient to smoke or drink alcohol.

5 Give hot liquids.

6 If lower extremity is involved, treat as litter patient with injured part level or slightly elevated.

7 Obtain medical help.

b. Carbon Monoxide Overexposure.

(1) Train personnel in the hazards of carbon monoxide.

(2) The most common source of carbon monoxide is the exhaust from internal combustion engines and field heaters in confined spaces without adequate ventilation: i.e., tanks, APCs, communication vans, and other enclosed area where portable internal combustion engines and heaters are used.

(3) Commanders ensure that:

(a) Personnel do not sleep in, on, or near fuel-powered vehicles while the engine (or heater) is running.

(b) Adequate ventilation is provided when engines, generators, battery chargers, and space heaters are operated.

(4) Personnel are trained to recognize the warning signs and symptoms of carbon monoxide

overexposure and how to perform emergency first aid treatment.

(a) Signs and symptoms. Throbbing temporal headache, generalized weakness, dizziness, dimness of vision, nausea, vomiting, muscular in coordination and collapse, increased pulse/respiration, unconsciousness.

(b) Treatment.

1 Remove individual from contaminated environment to fresh air.

2 If respiration is weak/absent, administer artificial respiration and seek medical help.

c. Field Heaters.

(1) Portable radiant-type space/tent heaters (pot - belly and Yukon) are operated in accordance with the following:

(a) Each operator must be thoroughly trained and licensed for the specific heater.

(b) Stovepipe opening flaps of the tent must be securely tied back so that flaps do not come in contact with the hot stovepipe.

(c) A sufficient number of stovepipe sections are used so that the top section is one foot above the highest point of the tent. Six pipe sections are usually adequate.

(d) When using solid fuel (such as wood or coal) with the heater, a spark arrester must be installed on the top stovepipe section.

(e) When using liquid fuels, a draft diverter must be installed on the top section and secured with guy ropes. (Guy ropes are not used with solid fuel.)

(f) Stovepipe sections must be straight up and not allowed coming into contact with any part of the tent. Tents must be inspected to ensure that they are not sagging, and that canvas parts will not come into contact with the stovepipe.

(g) The area surrounding the heater inside the tent must be cleared of combustibles (including dry grass, pine needles etc.) for a distance of four feet.

(h) Fuel cans, lines, and carburetors must be checked daily for leaks, particularly after changing

fuel cans. No heater will be operated when fuel leaks are present.

(i) When heaters are operating, a Carbon Dioxide (CO₂ fire extinguisher must be immediately available in the tent.

(j) Tent heaters must never be operated at full capacity even in the extreme cold. Overheating of the stovepipes may ignite tentage.

(k) Tents with wooden or canvas floors must have sand boxes on which the heaters are to be placed (at least three inches of sand/dirt must be used for this purpose).

(l) Adequate ventilation must be provided where spaceheaters are operating.

(m) The fuel supply can for the heater must be located outside the tent and as far from the tent as the fuel hose allows.

(n) While some tent heaters are designed to use several types of liquid fuel. Gasoline will never be used as a heating fuel.

(o) A fireguard will be awake during heater operations.

(2) Only properly trained personnel must operate immersion heaters.

(3) When operating Herman Nelson heaters and/or similar heaters:

(a) The heater must be placed as far from structures as the length of the heating ducts will allow.

(b) A 20-foot long steel chain or cable is attached to the heater to facilitate removal in case of fire.

(c) A 5-foot high sandbag buffer must be maintained on the front and two sides of the heater.

(d) Fireguards are posted when Herman Nelson heaters and/or radiant-type tent heaters are operated.

14-4. TRAINING.

a. All weapons must be inspected prior to firing. A full function check must be conducted prior to any training.

b. During all exercises, especially utilizing blanks, a safety NCO or the safety officer will check all ammunition.

c. Weapon muzzles will be pointed up in the air and down range at all times. During live firing, all weapons must be presumed to be loaded and must, therefore, never playfully be pointed at anyone or anything.

d. During any simulation training in which MILES equipment is utilized with blank ammunition the OIC/RSO must emphasize the minimum safe distance for rules of engagement concerning all weapon systems involved, Table 19-2, AR 385-63.

e. To preclude injury, blank ammunition is not fired without a properly fitted blank adapter for the weapon system used. Foreign matter, such as twigs or gravel, cannot be used in lieu of a blank adapter.

14-5. TICKS.) Personnel in this area are exposed to deer ticks during training. Some ticks on Fort McCoy carry Lyme Disease. To avoid ticks:

a. Wear clothing in a protective manner, to include long sleeve shirts and trousers tucked in the socks.

b. Avoid grassy and bushy areas whenever possible, particularly the outer edges of each.

c. Inspect body and clothing frequently. Shower as soon possible after being in a suspected tick habitat.

d. The most effective repellents are Permanone-clothing repellent (NSN 6840-01-278-1336) and DEET-personal application (NSN 6840-00-753-4963).

<u>HEAT PHASE GUIDELINES</u>					
CATAGORY	I	2	3	4	5
WBGT INDEX ¹	78-81.9	82-84.9	85-87.9	88-89.9	90 +
WORK/REST: ^{2,3} EASY MODERATE HARD	No Limit No Limit 40/20 min	No Limit No Limit 30/30 min	No Limit 40/20 min 30/30 min	No Limit 30/30 min 20/40 min	50/10 min 20/40 min 10/50 min
WATER INTAKE (qts/hr): ⁴ EASY MODERATE HARD	1/2 3/4 3/4	1/2 3/4 1	3/4 3/4 1	3/4 3/4 1	1 1 1
<p>NOTES:</p> <p>1. MOPP gear or body armor adds 10 degrees to WBGT.</p> <p>2. The work/rest times and fluid replacement volumes will sustain performance and hydration for at least four (4) hours in the specified heat category.</p> <p>3. Rest means minimal physical activity (sitting or standing) and should be accomplished in the shade if possible.</p> <p>4. Hourly fluid intake should not exceed 1 1/2 quarts. Daily fluid intake should not exceed 12 quarts. Individual water needs will vary \pm 1/4 quart.</p> <p>EASY WORK: Weapon maintenance; walking on hard surface at 2.5 mph, <30 pound load; manual of arms; marksmanship training; drill and ceremony</p> <p>MODERATE WORK: Walking on loose sand at 2.5 mph, no load; walking on hard surface at 3.5 mph, < 40 pound load; calisthenics; patrolling.</p> <p>HARD WORK: Walking on hard surface at 3.4 mph, > 40 pound load; walking on loose sand at 2.5 mph with a load; digging.</p> <p>These guidelines are a tool for the Commander. It is the Commander's decision based on the personnel and type training what actions are to be taken. Soldiers who are overweight, dieting or past heat casualties are more prone to heat injuries. As a result, their activities must be closely monitored.</p> <p>THE WBGT INDEX IS ANNOUNCED BY RANGE OPERATIONS HOURLY DURING RADIO CHECKS OVER FM FREQUENCY 46:80 MHZ.</p>					

Figure 14-1

<u>WIND-CHILL INDEX GUIDELINES</u>		
<u>WIND-CHILL INDEX</u>	<u>UNIFORM</u>	<u>ACTION</u>
40-35 degrees	BDU, boots, field jacket, gloves w/ inserts	Continue normal training activities as scheduled.
34-30 degrees	BDU, boots, parka w/liner, gloves w/ inserts, scarf	Continue normal training activities as scheduled. Initiate buddy system for checking for cold injuries.
29 degrees and below	(Dry): BDU, boots, OG 108 cap, parka w/ liner, gloves or mittens w/ inserts, scarf, long johns, extra socks (carried) (Wet): BDU, boots, OG 108 cap, parka w/ liner, gloves or mittens w/ inserts, scarf, long johns, overshoes, field trousers, extra socks (carried), wet weather gear	Ensure that all personnel are wearing cold weather clothing with special attention to the protection of hands, ears and feet. Provide warm-up areas and hot beverages.
0 Degrees and below	Same	Leaders inspect personnel for cold injuries. Increase frequency of rotation to warming areas.
-6 degrees and below	Same	Continue training but cancel bivouac.
-25 degrees and below	Same	Cease outdoor training. Move soldiers into warming areas and arrange to conduct suitable training indoors.
NOTE: These guidelines are a tool for the Commander. It is the Commander's decision based on the personnel and type training what actions are to be taken.		
THE WIND CHILL INDEX IS ANNOUNCED BY RANGE OPERATIONS DURING THE HOURLY COMMUNICATIONS CHECK OR AS IT CHANGES ON FM FREQUENCY 48:80 MHz.		

Figure 14.2

CHAPTER 15 RANGE SANITATION PROCEDURES

15-1. GENERAL.

a. Foxholes, bunkers, tent ditches and all open pits are filled in prior to facility clearance.

b. All training areas must be properly policed and serviced by the using units according to the range control checklist provide in each range book. Range inspectors will use this checklist to inspect each site.

15-2. DISPOSAL OF WASTE MATTER.

a. Waste fuel, oils, solvents, and other vehicle fluids must be collected in separate containers for disposal or recycling. All containers must be free of rust and tightly sealed. The responsible unit shall fund the cost associated with proper disposal of these materials. The Environmental Division (ED) must be contacted in order to prepare proper turn-in documentation and assure materials are properly labeled and contained. Contact ED at least one day prior to the desired turn-in day. The Defense Reutilization and Marketing Office (DRMO) will not accept any of these materials until they have been processed through ED. The unit will be required to submit their DODAAC number to ED for billing.

b. All trash and garbage will be transported by units to the Fort McCoy Recycling Center/Transfer Station, bldg. 2218, (Grid XJ83337532), ext. 2-2968/3051. Hours of operation are 0730-1500 Monday-Friday or by special arrangement. Do not bring barbed tape or concertina to this facility or put it in dumpsters. These materials must either be taken back with the unit or boxed and taken to DRMO, building 2184. Disposal of construction demolition material shall be coordinated with the Transfer Station at ext. 2-4327 prior to disposal. No waste materials of any type will be disposed of in any training facility or area.

c. Fort McCoy has an active recycling program in place. All paper, cardboard, plastic (#1 and 2), clear

glass bottles, steel cans, and aluminum T-ration containers shall be collected, and disposed of at the Fort McCoy Recycling Center.

15-3. GRAY WATER.

a. Gray water sites will be requested on a special site request and submitted to Range Operations for approval. Sumps for disposal of gray water will be constructed IAW FM 21-10, Field Hygiene and Sanitation. Sumps shall be filled and area returned to original conditions prior to departure of unit. Grease shall be strained from the wash water and collected in trash bags and disposed of at the Transfer Station, bldg. 2215, ext. 2-4327.

b. Wastewater generated from mess operations in/around the cantonment area shall be collected and disposed of in the Fort McCoy sewer system.

APPENDIX A REFERENCES

REQUIRED PUBLICATIONS

AR 11-9
The Army Radiation Safety Program
(Cited para 1-5i)

AR 95-1
Flight Regulations
(Cited paras 9-1, 9-6)

AR 190-11
Physical Security of Arms, Ammunition and Explosives
(Cited para 7-3)

AR 350-41
Training in Units
(Cited para 5-22)

AR 385-62
Regulations for Firing Guided Missiles and Heavy Rockets for Training, Target Practice and Combat
(Cited para 8-9, appendix G)

AR 385-63
Policies and Procedures for Firing Ammunition for Training, Target Practice and Combat
(Cited paras 7-1, 7-3, 8-9, 10-3, 15-4, appendix G)

AR 600-55
The Army Driver and Operator Standardization Program (Selection, Training, Testing and Licensing)
(Cited para 13-7)

DA PAM 385-40
Army Accidents Investigation and Reporting w/ USAREC Supplement
(Cited para 9-7)

DA PAM 385-64

Ammunition and Explosives Safety Standards
(Cited para 7-3)

Environmental and Natural Resources Customer Support Package
(Cited para 2-8)

FM 6-40
Tactics, Techniques and Procedures for Field Artillery Manual Cannon Gunnery
(Cited para 8-14, appendix G)

FM 6-50
Tactics, Techniques and Procedures for the Field Artillery Cannon Battery
(Cited paras 8-9, 8-14, appendix G)

FM 6-60
Tactics, Techniques and Procedures for the Multiples Launch Rocket System (MLRS) Operations
(Cited para 8-15)

FM 10-67-1
Concepts and Equipment of Petroleum Operations
(Cited para 9-7)

FM 21-40
Field Hygiene and Sanitation
(Cited para 16-3)

FM 23-90
Mortars
(Cited para 8-9, appendix G)

FM 23-91
Mortar Gunnery
(Cited appendix G)

FM 57-220
Static Line Parachuting Techniques and Training
(Cited para 11-1)

FT McCOY REG 350-2
Training
(Cited para 2-3)

FT McCOY PAM 350-10
Aerial Gunnery
(Cited

FT McCOY AMMUNITION SUPPLY POINT EXTERNAL SOP
(Cited para 7-3)

TB MED 524
Control of Hazards to Health from LASER Radiation
(Cited para 10-2)

TC 24-20
Tactical Wire and Techniques
(Cited para 3-5)

TM 9-1425-646-10-1
Operator's Manual for Launcher Rocket, Armored
Vehicle Mounted; M270 (MLRS) Vol 1
(Cited para 8-15)

TM 9-1425-464-10-2
Operator's Manual for Launcher Rocket, Armored
Vehicle Mounted; M270 (MLRS) Vol 2
(Cited para 8-14)

TM 9-2350-314-10
Operator's Manual for Howitzer Medium Self-
propelled 155mm M109A6
(Cited para 8-14)

TM 43-0001-28
Army Ammunition Data Sheets for Artillery
Ammunition
(Cited para 8-9)

RELATED PUBLICATIONS

AR 11-2
Management Control

AR 40-5
Preventive Medicine

AR 40-46
Control of Health Hazards from Lasers and other
High Intensity Optical Sources

AR 75-1
Malfunctions Involving Ammunition and Explosives

AR 75-15
Responsibilities and Procedures for Explosive
Ordnance Disposal

AR 190-13
Army Physical Security Program

AR 200-1
Environmental Protection and Enhancement

AR 200-2
Environmental Effects of Army Actions

AR 200-3
Natural Resources - Land Forest and Wildlife
Management

AR 200-4
Cultural Resources management

AR 350-1
Army Training w/USARC Supplement

AR 350-4
Integrated training Area Management (ITAM)

AR 350-41
Training in Units

AR 385-9
Safety Requirements for Military Lasers

AR 385-10
The Army Safety Program

AR 385-55
Prevention of Motor Vehicle Accidents

AR 385-65
Identification of Inert Ammunition and Ammunition
Components

AR 385-95
Army Aviation Accident Prevention

DA PAM 40-501
Hearing Conservation Program

DA PAM 200-4
Cultural Resources Management

DA PAM 350-38
Standards in Weapons Training

FM 1-100
Army Aviation Operations

FM 1-140
Helicopter Gunnery

FM 3-5
NBC Decontamination

FM 3-6
Field Behavior of NBC Agents (Including Smoke and
Incendiaries)

FM 3-11

FORT McCOY REGULATION 350-1

Flame, Riot Control Agents and Herbicide Operations

FM 3-50
Smoke Operations

FM 5-100
Engineer Combat Operations

FM 5-103
Survivability

FM 5-250
Explosives and Demolitions
FM 5-227
M2 Bailey Bridge

FM 5-434
Earthmoving Operations

FM 6-2
Tactics, techniques and Procedures for Field Artillery Survey

FM 6-30
Tactics, Techniques and Procedures for Observed Fire

FM 7-90
Tactical Employment of Mortars

FM 7-91
Tactical Employment of Anti-armor Platoons, Companies, and Battalions

FM 9-13
Ammunition Handbook

FM 9-43-2
Recovery and Battle Damage Assessment and Reports

FM 9-207
Operation and Maintenance of Ordnance material in Cold Weather

FM 19-40
Enemy Prisoners of War, Civilian Internees and Detained Persons

FM 9-15
Explosive Ordnance Disposal Service and Unit Operations

FM 10-500-3

Airdrop of Supplies and Equipment Rigging Containers

FM 17-12-1-1
Tank Gunnery (Abrams) Vol 1

FM 17-12-1-2
Tank Gunnery (Abrams) Vol 2

FM 19-4
Military Police Battlefield Circulation Control, Area Security and Enemy Prisoner of War Operations

FM 20-32
Mine/Countermine Operations
FM 21-10
Field Hygiene and Sanitation

FM 21-11
First Aid for Soldiers

FM 21-16
Unexploded Ordnance Procedures

FM 21-18
Foot Marches

FM 21-20
Physical Fitness Training

FM 21-26
Map Reading and Land navigation

FM 21-75
Combat Skills of the Soldier

FM 21-76
Survival

FM 21-150
Combatives

FM 21-305
Manual for the Wheeled Vehicle Driver

FM 21-306
Manual for the Track Combat Vehicle driver

FM 23-1
Bradley Fighting Vehicle Gunnery

FM 23-9
M16A1 Rifle and M16A2 Rifle Marksmanship

FM 23-10
Sniper Training

FM 23-14
M249 Light Machine Gun in the Automatic Rifle
Role

FM 23-23
Antipersonnel Mine M18a1 and M18 (Claymore)

FM 23-24
Dragon Medium Antitank/Assault Weapon System
M-47

FM 23-25
Light Anti-armor Weapons

FM 23-27
MK 19, 40mm Grenade Machine Gun, Mod3

FM 23-30
Grenades and Pyrotechnic Signals

FM 23-31
40mm Grenade Launcher, M203

FM 23-34
TOW Weapon System

FM 23-35
Combat Training with Pistols and Revolvers

FM 23-65
Browning Machine Gun, Cal 50, HB, M2

FM 23-67
Machine Gun, 7.62mm M60

FM 90-6
Mountain Operations

FM 90-10
Military Operations on Urbanized Terrain (MOUT)

FM 90-10-1
An Infantryman's Guide to Combat in Built Up Areas

FM 90-13
River Crossing Operations

FM 90-13-1
Combined Arms Breeching Operations

FM 100-14
Risk Management

Fort McCoy Reg 190-05
Installation Traffic Code

Fort McCoy Reg 350-2
Training

Fort McCoy Reg 385-10
Fort McCoy Safety Program

Fort McCoy Reg 420-3
Fire Prevention and Protection

Fort McCoy Reg 420-25
Hazardous Waste Management Program

Fort McCoy Reg 420-26
Fort McCoy Hunting, Fishing and Trapping
Regulation

Fort McCoy Multipurpose Training Range SOP

Fort McCoy Trig List

TC 21-24
Rappelling

TM 9-1010-223-10
Operator's Manual Lightweight Company Mortar
60mm

TM 9-1015-200-10
Operator's Manual for Mortar 81mm

TM 9-1015-250-10
Operator's Manual for Mortar 120mm M120, M121

TM 9-1015-254-13&P
Operator's, unit and Direct Support Maintenance
Manual for Mortar Subcaliber Insert M303

TM 9-1300-200
Ammunition General

TM 9-1300-214
Military Explosives

TM 9-1370-207-10
Pyrotechnic Simulator Operator's Manual

TM 9-1375-213-12
Operator's and Unit Maintenance Manual for
Demolition Materials

TM 9-1025-211-10
Operator's manual for Howitzer Medium, Towed
155mm M198

FORT McCOY REGULATION 350-1

TM 9-2350-311-10
Operator's manual for Howitzer, Medium Self-
propelled 155mm M109 A3/A4/A5

Range Map (Fort McCoy Special), 1:50,000

Fort McCoy Hunting Area Map

PRESCRIBED FORMS

DA Form 1594

Fort McCoy Form 38

Fort McCoy Form 38A

Fort McCoy Form 340-R-E Range Operations
Accident/Incident Report

Fort McCoy Form 341-R-E Special Site Request

REFERENCED FORMS

Fort McCoy Form 343-R-E Clearance Checklist

Fort McCoy Form 1868 DZO Final Report

Fort McCoy Form 350-R-E Indirect Fire OIC/Safety
Officer Checklist

Fort McCoy Form XXX-XR Indirect Fire Safety
Card/Diagram

Fort McCoy Form 346-R-E Jumpmaster
Qualification Statement

Fort McCoy Form 344-R-E NBC Chamber
Qualification Statement

Fort McCoy Form 345-R-E NBC Chamber Safety
Checklist

Fort McCoy Form 348-R-E Rappelling Operations
Checklist

Fort McCoy Form 347-R-E Rappel Tower
Certification Statement

Fort McCoy Form 342-R-E Training Inspection
Checklist

APPENDIX B OIC/RSO REQUIREMENTS

The table provides the requirements for Officers-in-Charge (OIC) and Range Safety Officers (RSOs):

TYPE OF RANGE/ACTIVITY	OFFICER-IN-CHARGE	SAFETY OFFICER
Small Arms & Machine Guns	E6 or Higher	E6 or Higher
Practice Hand Grenades & Subcaliber Training Devices	E6 or Higher	None Required *5
Laser Ranges	E7 or Higher *1	E6 or Higher *1
Chemical Agents & Smoke	E6 or Higher *2	None Required *3
Hand Grenades	E7 or Higher	E6 or Higher
Rockets & Guided Missiles	E7 or Higher	E6 or Higher
Mortar	E7 or Higher *4	E6 or Higher
Artillery	E7 or Higher *4	E6 or Higher
Firing Devices, Trip Flares & Simulators	E7 or Higher	E6 or Higher
Mines & Explosives Charges	E7 or Higher	E6 or Higher
Training Areas	E6 or above	None Required*6
<u>Live Fire Exercises</u>		
Using Organic Weapons		
Squad Section	E7 or Higher	E6 or Higher
Platoon	E7 or Higher	E6 or Higher
Company/Squadron	E7 or Higher	E6 or Higher
Using Outside Fire Support:		
Squad-Section	E7 or Higher	E6 or Higher
Platoon	E7 or Higher	E6 or Higher
Company or Higher	O4 or Higher	O3 or Higher

NOTES:

1. Must be laser qualified.
2. When NBC training is being conducted, OIC must be NBC qualified.
3. If a safety officer is used, he/she must be NBC qualified.
4. The indirect fire commander is responsible for safety during all phases of a firing exercise under his control. The commander will determine, select, train and safety certify the personnel necessary to assist him in discharging this responsibility.

5. If practice fuzes are used a Safety Officer required.
6. Unless utilizing another system as indicated above

APPENDIX C RANGES, TRAINING AREAS AND FACILITIES

C-1. RANGE 1

a. CAPABILITIES:

(1) Primary: Combat Pistol day and night qualification. The range is a Combat Pistol Range equipped with Remote Electronic Targets System (RETS). The range is capable of providing a variety of firing scenarios and is computer scored.

(2) Alternate: Pistol Assault and pistol qualification course.

(3) Ammunition Capability: .22, .38, .40, .357 .45, 9mm, 10mm and shotgun.

b. SPECIAL INSTRUCTIONS:

(1) Only Range Control personnel are authorized to repair the down range targetry.

(2) Range Control personnel run the tower only. Using agencies provide OIC, safety officer and assistant instructors.

(3) A scenario for the range must be coordinated with RETS personnel NLT 30 days prior to use.

C-2. RANGE 2 (To be completed FY2000)

a. CAPABILITIES:

(1) Primary: Machine Gun Transition and Qualification course day and night. Range is equipped with Remote Electronic Targets from 100 to 800 meters, which are computer controlled and computer scored.

(2) Alternate: Machine Gun familiarization, NBC firing, sniper training and Bradley gunnery.

(3) Ammunition Capability: 5.56mm, 7.62mm, .50 cal, 25mm.

b. SPECIAL INSTRUCTIONS:

(1) Range Division personnel run tower only. Using agencies provide OIC, safety officer and assistant instructors.

(2) A scenario for the range must be coordinated with RETS personnel NLT 30 days prior to use.

(3) One assistant instructor is assigned per every two guns.

(4) The Machine Gun, Caliber .50, M2 is not fired until headspace and timing has been checked by a safety NCO.

(5) Machine Guns are considered clear when the cover is open, the bolt is to the rear, the safety is on safe and the gun crew is standing to the rear of the gun.

(6) Maximum elevation of 50 mils will not be exceeded when firing the Machine Gun, Caliber .50, M2. The M2 will be chained down when fired from vehicle mounts

C-3. RANGE 6

a. CAPABILITES:

(1) Primary: Platoon/squad movement to contact and attack.

(2) Alternate: Platoon/squad ambush; platoon/squad defense

(3) Ammunition Capability: .22, .38, .40, .357, .45, 9mm, 10mm, shotgun, 5.56, 7.62, 40mm (TP,ILL,SMK)

b. SPECIAL INSTRUCTIONS:

(1) Use of this range requires special approval of the unit plan by Range Operations. Units will submit an operational plan, safety plan, risk assessment worksheet and an overlay indicating target positions and weapon positions with direction of fire NLT 30 days prior to use. The approved plan will be on site

with the OIC during training. Units will only use ammunition approved by Range Operations as indicated in the unit plan.

(2) Participants must be briefed on the specific targets appropriate for the weapon system, its firing limits for the range and instructed to keep fires within the prescribed limits.

(3) Individuals move forward only on the command of the OIC and are limited to the first crossing road down range from the tower.

(4) All weapons are to be loaded just before firing and only on the command of the OIC. All weapons loading/aiming and unloading/disarming is performed on the firing line with the weapons pointed down range.

(5) The M203 requires a minimum distance of 100 meters between the impact area and the firing line for TP ammunition.

(6) 40mm TP ammunition will be cleared from the range when training is completed IAW TB 9-1310-251-10.

(7) Firing with the 40mm Grenade Launcher, M203, is discontinued when ground winds are in excess of 30 mph.

(8) Machine guns are considered clear when the cover is open, the bolt is to the rear, the safety on the safe position and the crew standing to the rear of their weapon.

(9) Users must provide a fire extinguisher during use.

(10) CS gas will not be used at any time.

(11) Only one vehicle is permitted in vicinity of firing line on Range 6, all other vehicles are parked in the designated parking area.

(12) No armor piercing ammunition is allowed.

(13) A full function check of the weapon, conducted by the Safety Officer, is required before range utilization. If any weapon fails [fires on safe] the weapon will be cleared, rodded, removed from live fire lane and reported to the unit armorer for repair.

(14) Forward movement of troops participating in firing exercises on this range is to be controlled. As a

minimum, every individual to be trained, as well as each cadre/instructor, is required to conduct a dry run to ensure the firer and all controllers are thoroughly familiar with the control points and procedures used to regulate forward progress.

(15) Before each successive movement forward, firers are required to set weapons on safe and announce WEAPON ON SAFE and their intention.

(16) Cease-fire procedures are initiated by utilizing a red star cluster and announcing CEASE-FIRE.

(17) Units using 40mm TP ammunition must have the proper equipment to remove duds (face shields, gloves and tongs.)

(18) The OIC and Safety Officer will monitor firing of 40mm and ensure personnel do not enter areas where duds have occurred unless conducting clearing operations.

(19) NIGHT FIRE OPERATIONS:

(a) During night fire training adequate time will be given to firers to allow for night vision adjustment prior to firing

(b) The range OIC and/or Safety Officer to ensure proper orientation of weapons and disposition of all personnel on the firing line, will use night vision goggles.

(c) Smoke will not be utilized during night operations.

(d) The unit will mark the range limits with a red light source.

(20) Unit will allow at least one hour for range inspection.

C-4. RANGE 7

a. CAPABILITIES:

(1) Primary: Grenade Launcher qualification and familiarization.

(2) Alternate: None.

(3) Ammunition Capability: 40mm TP.

b. SPECIAL INSTRUCTIONS:

(1) Personnel do not go forward of the firing line.

- (2) No cross lane firing is permitted.
- (3) Firing is discontinued when ground winds are in excess of 30 MPH.
- (4) The M203 requires a minimum distance of 100 meters between the impact area and the firing line for TP ammunition.
- (5) Duds are plotted and recorded as they occur. The OIC designates a responsible person to accomplish this task.
- (6) At the conclusion of the firing exercise the Range Clearance Sheet should indicate number of duds by type and lot number.
- (7) CS gas will not be used at any time.

C-5. RANGE 8

a. CAPABILITIES:

- (1) Primary: Hand Grenade Live Throw.
- (2) Alternate: None.
- (3) Ammunition Capability: Hand grenades (Fragmentation, Concussion, and Smoke) and practice grenade with M228 fuze.

b. SPECIAL INSTRUCTIONS:

- (1) Helmets must be worn within 200 meters of the live HE grenade bays. All available protective gear will be worn during live bay throwing. This includes protective vest, ear and eye protection.
- (2) All personnel not actively throwing grenades will be in the bunkers, the practice bays or the parking lot while grenades are thrown.
- (3) A road guard will be posted at the entrance to the range.
- (4) Live grenades are only issued just prior to live throw training.
- (5) Prior to throwing, all of the pits are to be checked to ensure the safety wall has a minimum clearance of ten inches.
- (6) Gloves or ponchos are not worn during live grenade training. Load Bearing Equipment (LBE), weapons or other paraphernalia that hinders the act of throwing grenades are not worn in the live bays.

(7) Personnel will be instructed, shown and physically demonstrated the actions to be taken for an accidental drop or short throw of a live grenade during the practice grenade portion of training.

(8) All personnel will throw a fused practice grenade prior to going to the live bay using the same equipment used in live bay throwing.

(9) Duds are reported to Range Control as they occur. Should a dud occur, the firing unit must temporarily close down the side of the range with a dud and reroute entry and exit procedures so as not to expose personnel to a delayed detonation. When a dud occurs, the OIC will notify Range Control immediately. Range Control will notify EOD. The dud's pit location is recorded and reported to Range Operations. Duds will be destroyed as they occur by qualified EOD personnel. Firing units record the exact time the dud occurs and report the elapsed time to the EOD Team upon their arrival. Duds must not be allowed to accumulate. Under no circumstances will another grenade be thrown in the pit with the dud grenade before EOD has destroyed the dud.

(10) Suspect ammunition, i.e. Ammunition lots with a high dud rate or that appears to have been tampered with, is reported to Range Operations and all throwing is suspended until ammunition has been cleared or replaced.

(11) At the completion of firing, an entry is made on Range Clearance Sheet indicating the number of duds experienced.

(12) Do not remove or use grenades found upside down in their packing containers.

(13) The "cook off" technique is not authorized.

(14) The safety pin will not be pulled until the grenade is to be thrown and once pulled will not be put back into the grenade.

(15) Grenades will not be modified in any way (tape, wire, etc.)

(16) Grenades will not be attached to clothing or equipment by the pull ring.

(17) The OIC and/or the Safety Officer will not force anyone to throw grenades and will only allow those personnel deemed proficient to throw.

C-7. RANGES 11 AND 15

a. CAPABILITIES:

- (1) Primary: Demolition Training (Light); MDI Transition
- (2) Alternate: None.
- (3) Ammunition Capability: Blasting cap, electric, non-electric and MDI; detonation cord, TNT, dynamite, and Composition C4.

b. SPECIAL INSTRUCTIONS:

- (1) Personnel not actually engaged in the firing operation remain in the protective bunker.
- (2) Blasting caps and demolitions are transported and stored separately.
- (3) The detonation area must be free of large pebbles, rocks metal fragments, or similar objects for a radius of 30 meters around the charge.
- (4) Craters are filled with missile free soil to a depth of six inches after each blast.
- (5) Only surface charges can be used for demonstrations. Detonation points must be located a minimum of 300 meters down range from unsheltered personnel. All personnel wear helmets and vests.
- (6) During detonation, the mouth is kept slightly open to allow pressure equalization on the eardrums.
- (7) Maximum explosive charge is limited to **10 pounds**. Charges in excess of 10 pounds are approved by Range Operations prior to detonation.
- (8) Notify Range operations five minutes prior to detonation to inform of intent to detonate and give the size of the charge.
- (9) Immediately following detonation, contact Range Operations and report detonation completed.
- (10) If the report following detonation is not submitted within five minutes of detonation time, Range Operations will attempt to contact the unit. If no response, a Range Division representative will be dispatched to investigate.
- (11) Non-electric charges are prepared a minimum distance of 15 meters from other explosive devices.

(12) The burn time of fuses is tested prior to use when not using MDI.

(13) All charges must be dual-primed.

(14) Charges are primed just prior to use at the demolition site. Blasting caps and charges are carried separately to the priming site. Primed charges are placed, not thrown, into the demolition pits.

(15) The power source for detonating charges is secured by locking and the key is in the possession of the person doing the priming. When using a portable power source the blasting machine or its activating device is also in the possession of the person doing the priming.

(16) Demolition exercises are not conducted during electrical storms or during dust, sand or snow storms of severity great enough to produce atmospheric static electricity or limit the line of sight to the demolition site.

(17) Improvised methods of exploding blasting caps are not allowed.

(18) A road guard will be posted at the entrance to the range.

(19) All non-organic (metal and plastic) debris is policed prior to requesting clearance.

(20) The following waiting periods are mandatory before investigating malfunctions:

<u>TYPE BLASTING CAP</u>	<u>WAITING TIME</u>
Non-Electric	35 Minutes
Electric (surface charge)	None
Electric (sub-surface charge)	30 Minutes

C-8. RANGE 12

a. CAPABILITIES:

- (1) Primary: Anti-Armor weapon system training. Primary targets are old tank hulls.
- (2) Alternate: Grenade Launcher training.
- (3) Ammunition Capability: 35mm Law Sub-Caliber, 40mm TP, AT4 Sub-Caliber and SMAW sub-cal.

b. SPECIAL INSTRUCTIONS:

(1) Rockets with loose closures (plastic plug) in the combustion chamber must not be fired. These rockets are segregated and reported to Range Control.

(2) Rockets failing to fire are removed from the launcher after a three-minute delay and placed into the misfire pit. Range Operations will be notified immediately.

(3) Firing demonstrations must be conducted to emphasize safety and proper firing procedures. Demonstrations include specific instructions to report all duds.

(4) A minimum of one Assistant Instructor is assigned per two firing points.

(5) All launcher loading and unloading is performed on the firing line with launcher on gunner's shoulder and muzzle pointed down range.

(6) The back blast for 3.5 Inch Rocket Launcher is 25 meters.

(7) Duds are plotted and recorded as they occur.

(8) A minimum distance of 100 meters must be maintained between the impact area and the firing line when firing the M203.

(9) Firing of 40mm TP is discontinued when ground winds are in excess of 30 MPH.

(10) During training with sub-caliber munitions for weapons with back blast characteristics personnel must practice all safety procedures and implement all required distances as though they were firing full caliber munitions.

(11) At the completion of firing, an entry is made on Range Clearance Sheet indicating the number of duds experienced.

C-9. RANGE 13CL

a. CAPABILITIES:

(1) Primary: TOW (Inert) live fire

(2) Alternate: Laser, Indirect fire observation.

(3) Ammunition Capability: TOW inert, Laser with filter.

b. SPECIAL INSTRUCTIONS:

(1) When TOW is fired, a road guard will be placed on the road to prevent entry into the back blast area.

(2) Firing limits for TOW are as follows:

(a) From vehicle in hull down position: 200-207 degrees.

(b) All others: 197-202 degrees.

(3) All personnel must be briefed to lase only the immediate impact area.

(4) A qualified laser safety officer must be present when lasers are in use.

(5) A laser safety briefing will be given to all personnel.

(6) All actual or suspected laser incidents will immediately be reported to Range Operations.

(7) All firing will cease and the weapon kept in place when a missile malfunctions. The unit will notify Range Operations immediately. The unit will plot the suspected location of the rocket and report it to Range Control.

C-11. RANGE 17A

a. CAPABILITIES:

(1) Primary: Demolition Training (Heavy)

(2) Alternate: None.

(3) Ammunition Capability: Blasting cap, electric and non-electric; detonation cord, TNT, dynamite, shape charges, bangalore torpedo and Composition C4, MDI.

b. SPECIAL INSTRUCTIONS:

(1) Personnel not actually engaged in the firing operation remain in the protective bunker.

(2) Blasting caps and demolitions are transported and stored separately.

(3) The detonation area must be free of large pebbles, rocks metal fragments, or similar objects for a radius of 30 meters around the charge.

(4) Craters are filled with missile free soil to a depth of six inches after each blast.

(5) Only surface charges can be used for demonstrations. All personnel wear helmets and vests.

(6) During detonation, the mouth is kept slightly open to allow pressure equalization on the eardrums.

(7) Maximum explosive charge is limited to **250 pounds**.

(8) Bangalore torpedoes are fired only in a horizontal position on the ground. Personnel must be in a missile proof shelter 100 meters from the charge, or 200 meters away in defilade, or 550 meters if no shelter is provided.

(9) Bangalore torpedoes are limited to a maximum of two sections to be detonated simultaneously.

(10) Shaped charges are oriented to direct the gas jet toward the target.

(11) Notify Range Operations five minutes prior to detonation to inform of intent to detonate and give the size of the charge.

(12) Immediately following detonation, contact Range Operations and report detonation completed.

(13) If the report following detonation is not submitted within five minutes of detonation time, Range Operations will attempt to contact the unit. If no response, a Range Division representative will be dispatched to investigate.

(14) The following waiting periods are mandatory before investigating malfunctions:

<u>TYPE BLASTING CAP</u>	<u>WAITING TIME</u>
Non-Electric	35 Minutes
Electric (surface charge)	None
Electric (sub-surface charge)	30 Minutes

(15) Non-electric charges are prepared a minimum distance of 15 meters from other explosive devices.

(16) The burn time of fuses is tested prior to use when not utilizing MDI.

(17) All charges must be dual-primed when not using MDI.

(18) Electric blasting caps must be kept shunted until actual priming of the charge.

(19) Charges are primed just prior to use at the demolition site. Blasting caps and charges are carried separately to the priming site. Primed charges are placed, not thrown, into the demolition pits.

(20) The power source for detonating charges is secured by locking and the key is in the possession of the person doing the priming. When using a portable power source the blasting machine or its activating device is also in the possession of the person doing the priming.

(21) Electric blasting caps and circuits can be energized to dangerous levels from outside sources such as static electricity, electric current, radio communication, high tension wires or other like sources. Precautions must be taken to reduce possible premature ignition of electrical blasting caps by keeping wires shunted until primed and ignition is desired.

(22) Demolition exercises are not conducted during electrical storms or during dust, sand or snow storms of severity great enough to produce atmospheric static electricity or limit the line of sight to the demolition site.

(23) Improvised methods of exploding blasting caps are not allowed.

(24) Steel cutting charges will not exceed 2lbs and will be covered with a mat made of hemp type material.

(25) All non-organic (metal and plastic) debris is policed prior to requesting clearance.

(26) Gates must be manned and closed when blasting charges over 125lbs, blowing bangalore torpedoes, or steel cutting.

(27) A road guard must be posted on the MSR on both side of the range at sites marked by yellow and black poles when using charges in excess of 125 lbs or bangalore torpedoes.

C-12. RANGE 18

a. CAPABILITIES:

(1) Primary: Machine Gun and SAW familiarization

(2) Alternate: NBC firing and sniper training.

(3) Ammunition Capability: 5.56mm, 7.62mm, .50 cal.

b. SPECIAL INSTRUCTIONS:

(1) Only Range Division personnel are authorized to repair the down range targetry.

(2) The Machine Gun, Caliber .50, M2 is not fired until headspace and timing has been checked by a safety NCO.

(3) Machine Guns are considered clear when the cover is open, the bolt is to the rear, the safety is on safe and the gun crew is standing to the rear of the gun.

(4) Maximum elevation of 50 mils must not be exceeded when firing the Machine Gun, Caliber .50, M2. Chains or other means will be utilized for both ground and vehicle mounted guns to prevent elevations of greater than 50 mils

(5) No armor piercing ammunition is allowed.

(6) The range OIC, to ensure proper orientation of weapons and disposition of all personnel on the firing line, will use night vision goggles.

(7) When utilized for night fire, the unit must mark the range limits with a red light source.

(8) Vehicle mounted guns will be fired from an area behind each foxhole. Vehicles are not permitted between foxholes because of the different angle of fire.

C-13. RANGE 26

a. CAPABILITIES:

(1) Primary: MICLIC.

(2) Alternate: Mortar Sub-cal.

(3) Ammunition Capability: MICLIC Inert; 60mm, 81mm, 120mm sub-cal.

b. SPECIAL INSTRUCTIONS: Units must request permission from Range Control before going past the berm to retrieve rounds.

C-14. RANGE 29

a. CAPABILITIES:

(1) Primary: Tank Tables IV to XII

(2) Alternate: TOW, Dragon, Door Gunnery, Aerial Gunnery Tables I to VIII, Machine -gun, AF Strafing, Laser Range Finder

(3) Ammunition Capability: 5.56, 7.62, .50 cal, 20mm TP, TPT, 25mm TPT, TPDST, 30mm TPT, SMAW TP, TOW inert, 40mm TP, 105mm TP, 120 HETPT, APCSDT, 2.75 Rockets

b. SPECIAL INSTRUCTIONS: Refer to MPTR SOP available at Range division or Fort McCoy Home Page.

C-15. RANGE 29A

a. CAPABILITIES:

(1) Primary: Anti-Armor weapon system training. Primary targets are old tank hulls.

(2) Alternate: Grenade Launcher training.

(3) Ammunition Capability: 35mm Law, 40mm (M203, MK19), DRAGON, SMAW and AT4.

b. SPECIAL INSTRUCTIONS:

(1) Rockets with loose closures (plastic plug) in the combustion chamber must not be fired. These rockets are segregated and reported to Range Control.

(2) Sub-cal rockets failing to fire are removed from the launcher after a three-minute delay and placed into a marked misfire pit. Range Control is notified immediately.

(3) Participants are to be briefed on the specific targets appropriate for the weapon system and it's firing limits for the range. Firers are to be instructed to keep fires within the prescribed limits. Briefing is to include:

(a) Specific instructions for handling misfires.

(b) No exploding dud producing munitions is to be fired at less than 200 meters down range. The M203 requires a minimum distance of 100 meters between the impact area and the firing line for TP ammunition and requires a minimum distance of 310

meters for HE ammunition. The MK19 has a minimum engagement distance of 400 meters for both TP and HE ammunition.

(c) Reporting all dud locations.

(d) Back blast areas.

(4) Duds are plotted and recorded as they occur.

(5) Range OIC indicates on the range clearance sheet the number of duds experienced and approximate location.

(6) Firing demonstrations must be conducted to emphasize safety and proper firing procedures. Demonstrations include specific instructions to report all duds.

(7) A minimum of one Assistant Instructor is assigned per two firing points.

(8) All launcher loading and unloading is performed on the firing line with launcher on gunner's shoulder and muzzle pointed down range.

(9) Firing of 40mm is discontinued when ground winds are in excess of 30 MPH.

(10) During training with sub-caliber munitions for weapons with back blast characteristics personnel must practice all safety procedures and implement all required distances as though they were firing full caliber munitions.

C-16. RANGE 31

a. CAPABILITIES:

(1) Primary: Rifle Qualification Course. This is a manual target system range equipped with up-down switch to lower or raise targetry.

(2) Alternate: Night fire, sniper training, target scanning, familiarization firing and NBC fire.

(3) Ammunition Capability: .22, .38, .40, .308, .357, .45, 9mm, 10mm, shotgun, 5.56.

b. SPECIAL INSTRUCTIONS:

(1) Only Range Division personnel are authorized to repair the down range targetry.

(2) During night fire training adequate time should be given to firers to allow for night vision adjustment prior to firing

(3) When utilized for night fire the unit must mark the range limits with a red light source.

C-17. RANGE 32

a. CAPABILITIES:

(1) Primary: Record Fire Proficiency and qualification range. This range is a Remote Electronic Target System (RETS) range equipped with a computer controlled targetry capable of varying scenarios and computer scoring. Target distances from primary firing line is arrayed at 50, 100, 150, 200, 250, and 300 meters. This range is capable of running 64 personnel per hour (four firing orders of 16 each per hour).

(2) Alternate: Night fire, NBC fire and practice qualification

(3) Ammunition Capability: .22, .38, .40, .357, .45, 9mm, 10mm, 5.56

b. SPECIAL INSTRUCTIONS:

(1) Only Range Division personnel are authorized to repair the down range targetry.

(2) Range Division personnel will run tower only. Using agencies are required to provide OIC, safety officer and assistant instructors.

(3) Scenarios for the range are coordinated with RETS personnel NLT 30 days prior to use.

C-18. RANGE 33

a. CAPABILITIES:

(1) Primary: 25 Meter multipurpose facility for pistol and rifle training. Pistol familiarization and rifle zeroing and alternate qualification.

(2) Alternate: NBC fire.

(3) Ammunition Capability: .22, .38, .40, .308, .357, .45, 9mm, 10mm, shotgun, 5.56, 7.62.

b. SPECIAL INSTRUCTIONS: When utilizing shotguns the dual framed target holder can not be used for target support. These frames are to be laid

down and units must use E silhouettes mounted on 1x2 board.

C-19. RANGE 34

a. CAPABILITIES:

(1) Primary: Machine Gun Transition course day and night. This is a manual target system range equipped with up-down switch to lower or raise targetry.

(2) Alternate: Machine Gun familiarization, NBC firing and sniper training.

(3) Ammunition Capability: 5.56mm, 7.62mm, .50 cal.

b. SPECIAL INSTRUCTIONS

(1) Only Range Division personnel are authorized to repair the down range targetry.

(2) One assistant instructor is assigned per every two guns.

(3) The Machine Gun, Caliber .50, M2 is not fired until headspace and timing has been checked by a safety NCO.

(4) Machine Guns are considered clear when the cover is open, the bolt is to the rear, the safety is on safe and the gun crew is standing to the rear of the gun.

(5) Maximum elevation of 50 mils must not be exceeded when firing the Machine Gun, Caliber .50, M2. Chains or other means will be utilized to ensure compliance.

(6) Weapons can be fired from tripods, mounts and ring mounts on vehicles.

(7) M2 .50 cal will only be fired from the two left points (1&2) of the field fire side of the range to include weapon zeroing.

C-20. RANGE 35

a. CAPABILITIES:

(1) Primary: Grenade Launcher qualification and familiarization.

(2) Alternate: None.

(3) Ammunition Capability: 40mm.

b. SPECIAL INSTRUCTIONS:

(1) Personnel do not go forward of the firing line.

(2) No cross lane firing is permitted.

(3) Firing is discontinued when ground winds are in excess of 30 MPH.

(4) The M203 requires a minimum distance of 100 meters between the impact area and the firing line for TP ammunition and requires a minimum distance of 310 meters for HE ammunition.

(5) Duds are plotted and recorded as they occur. The OIC designates a responsible person to accomplish this task.

(6) At the conclusion of the firing exercise the Range Clearance Sheet should indicate number of duds by type, lot number and disposition.

(7) No CS gas can be used at any time.

C-21. RANGE 36

a. CAPABILITIES:

(1) Primary: Dragon and Tow Tracking Range.

(2) Alternate: None

(3) Ammunition Capability: Dry fire only (eye safe lasers only).

b. SPECIAL INSTRUCTIONS:

(1) This is a dry fire range. ATWESS cartridges may be used with MILES equipment.

(2) All weapon systems must be equipped appropriate laser filters.

(3) The OIC or the Safety Officer prior to the start of any training checks all weapons for live rounds.

C-22. RANGE 100

a. CAPABILITIES:

(1) Primary: 25-Meter multipurpose facility for pistol and rifle training. Pistol familiarization and rifle zeroing.

(2) Alternate: NBC fire and night fire.

(3) Ammunition Capability: .22, .38, .40, .357, .45, 9mm, 10mm, shotgun, 5.56.

b. SPECIAL INSTRUCTIONS:

(1) Firers are not allowed to move beyond the line of target frames.

(2) When utilizing shotguns the dual framed target holder can not be used for target support. These frames are to be laid down and units must use E silhouettes mounted on 1x2 board.

(3) During night fire training adequate time should be given to firers to allow for night vision adjustment prior to firing

(4) When utilized for night fire the unit must mark the range limits with a red light source.

(5) An air-guard will be posted to observe for stray aircraft.

(6) Firers will not exceed the vertical limit markers when firing rifles.

C-23. RANGES 101 AND 101KD

a. CAPABILITIES:

(1) Primary: Record Fire Proficiency and qualification range. This range is a Remote Electronic Target System (RETS) range equipped with a computer controlled targetry capable of varying scenarios and computer scoring. Target distances from primary firing line is arrayed at 50, 100, 150, 200, 250, and 300 meters. This range is capable of running 64 personnel per hour (four firing orders of 16 each per hour).

(2) Alternate: Night fire, NBC fire, known distance and practice qualification

(3) Ammunition Capability: .22, .38, .40, .357, .45, 9mm, 10mm, 5.56

b. SPECIAL INSTRUCTIONS:

(1) Only Range Division personnel are authorized to repair the down range targetry.

(2) Range Control personnel will run tower only. Using agencies are required to provide OIC, safety officer and assistant instructors.

(3) Scenarios for the range are coordinated with RETS personnel NLT 30 days prior to use.

(4) Pit personnel cannot leave the shelter of the pits during firing.

(5) Vehicles are not allowed in pits during live fire exercises.

(6) An air-guard will be posted to observe for stray aircraft.

(7) Firers will not exceed the vertical limit markers when firing rifles.

C-24. RANGE102

a. CAPABILITIES:

(1) Primary: 25-Meter multipurpose facility for pistol and rifle training. Pistol familiarization and rifle zeroing.

(2) Alternate: NBC fire.

(3) Ammunition Capability: .22, .38, .40, .357, .45, 9mm, 10mm, shotgun, 5.56.

b. SPECIAL INSTRUCTIONS:

(1) Firers are not allowed to move beyond the line of target frames.

(2) When utilizing shotguns the dual framed target holder can not be used for target support. These frames are to be laid down and units must use E silhouettes mounted on 1x2 board.

(3) This range is oriented to the left. OICs/RSOs must ensure that firers do not adjust lanes to shoot toward the berm.

(4) An air-guard will be posted to observe for stray aircraft.

(5) Firers will not exceed the vertical limit markers when firing rifles.

C-25. AIRBORNE TRAINING FACILITY (ATF)

a. CAPABILITIES:

(1) Primary: Train soldiers in basic and refresher airborne techniques.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS:

(1) Facilities on site are: Mock 34 foot tower w/6 door lines, 1 ramp line; Swing landing trainer; Suspension trainer; Lateral drift apparatus; PLF pit; PLF platforms; and Pull up bars.

(2) OIC/RSO will be jumpmaster qualified. OIC will complete the Jumpmaster Qualification Statement, found in Appendix of this regulation, when drawing the range packet. Units may attach a copy of the statement to the Ft McCoy Form 38A when requesting the facility.

C-26. BAYONET ASSAULT COURSE (BAC)

a. CAPABILITIES:

(1) Primary: Train soldiers to negotiate battle field obstacles while engaging various bayonet targets.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS:

(1) Course consists of six (6) 450-meter long lanes on which there are eighteen (18) obstacles and bayonet targets.

(2) Unit will have at a minimum a Combat Lifesaver.

C-27. BAYONET TRAINING COURT (BTC)

a. CAPABILITIES:

(1) Primary: Train soldiers in the use of the bayonet when attached to a rifle.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS:

(1) The court consists of forty (40) bayonet targets and will accommodate eighty (80) personnel.

(2) Unit will have at a minimum a Combat Lifesaver.

C-28. COMPASS COURSES (CC) 1, 2, 3

a. CAPABILITIES:

(1) Primary: Beginners day land navigation course.

(2) Alternate: Intermediate night land navigation.

(3) Ammunition Capability: None

b. SPECIAL INSTRUCTIONS: Have plan to locate any lost soldiers (i.e.: panic azimuth, roving vehicle around perimeter of course).

C-29. CONDITIONING COURSE (COND)

a. CAPABILITIES:

(1) Primary: Test of Physical Conditioning. The course has various low obstacles that are designed to be negotiated quickly as a test of various basic skills, running the course is a test of the soldiers' physical conditioning.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS:

(1) Prior to running the course an inspection of each obstacle will be conducted.

(2) Negotiation of higher risk and more dangerous obstacles is monitored and supervised by an assistant instructor.

(3) Training on the course should be postponed when the obstacles are wet or slippery.

C-30. CONFIDENCE COURSE (CONF)

a. CAPABILITIES:

(1) Primary: Test of Mental and Physical Confidence. The Confidence Course gives soldiers confidence in their mental and physical ability and cultivates their spirit and daring. Soldiers are encouraged but not forced to negotiate this course. It is not run against time.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS:

(1) Prior to running the course an inspection of each obstacle will be conducted.

(2) Negotiation of higher risk and more dangerous obstacles is monitored and supervised by an assistant instructor.

(3) Training on the course should be postponed when the obstacles are wet or slippery.

C-31. DECON SITE (DECON)

a. CAPABILITIES:

(1) Primary: Train and test units, up to company size, in NBC decontamination procedures.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS:

(1) Site is constructed to allow personnel and vehicles to be decontaminated simultaneously.

(2) Decon equipment must be requested through 88th RSC equipment concentration site (ECS).

(3) Only water can be used to represent contaminants and decontaminant solutions.

C-32. ENEMY PRISONER OF WAR (EPW) COMPOUND TRAINING SITES 1, 2

a. CAPABILITIES:

(1) Primary: Enemy Prisoner of War Compound. Facility designed to test operations of a Military Police platoon/company. The compound serves as a fixed facility to conduct refugee and POW activities.

(2) Alternate: None

(3) Ammunition Capability: Blanks and pyrotechnics.

b. SPECIAL INSTRUCTIONS: The compound must be thoroughly inspected for safety before use.

C-33. ENGINEER SITE 1 (ES 1) Wood Trestle Bridge

a. CAPABILITIES:

(1) Primary: To train engineer platoon/squads to construct a wood trestle bridge.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS: None

C-34. ENGINEER SITE 5 (ES 5) M4T6 Raft (float)(Alderwood)

a. CAPABILITIES:

(1) Primary: To train engineer platoon/squads to construct a wood trestle bridge.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS:

(1) The bridging materials are stored in the bridge storage site located on west side of cantonment area (grid XJ 840769).

(2) Rafts are pre-loaded on trucks for unit use.

(3) Drivers must have properly annotated drivers licenses.

C-35. ENGINEER SITE 15 (ES 15) Bailey Bridge

a. CAPABILITIES:

(1) Primary: Train engineer platoon/squads to construct a Bailey Bridge.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS: Units must provide bridging equipment.

C-36. ENGINEER SITE 16 (ES 16) M4T6 Raft (dry span)

a. CAPABILITIES:

(1) Primary: Train engineer bridge platoons/squads to construct a M4T6 raft over a dry span.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS:

(1) The bridging materials are stored in bridge storage site located on west side of cantonment area (grid XJ 840769).

(2) The use of blanks, pyrotechnics, and smoke is not authorized on or near this training site.

C-37. ENGINEER SITE 24 (ES 24) Earth Moving Site

a. CAPABILITIES:

(1) Primary: Train earth moving equipment operators.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS: Units will not go beyond the berm without Range Control permission.

C-38. HAND GRENADE QUALIFICATION COURSE (HGQC)

a. CAPABILITIES:

(1) Primary: Train soldiers to throw practice hand grenades.

(2) Alternate: None.

(3) Ammunition Capability: Practice grenade fuzes.

b. SPECIAL INSTRUCTIONS: Units will inform Range Control in the occupation request that practice fuzes are being utilized.

C-39. HAND TO HAND FIGHTING COURT (HHC)

a. CAPABILITIES:

(1) Primary: Train soldiers in the art of hand to hand combat.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS: None

C-40. INFANTRY BATTLE DRILL COURSE (IBDC)

a. CAPABILITIES:

(1) Primary: Train dismounted infantry (non-live fire).

(2) Alternate: None.

(3) Ammunition Capability: Blanks, MILES and pyrotechnics.

b. SPECIAL INSTRUCTIONS:

(1) Use of pyrotechnics requires Range Control permission.

(2) Units will inform Range Control in the occupation request that pyrotechnics are being utilized.

C-41. LITTER OBSTACLE COURSE (LOC)

a. CAPABILITIES:

(1) Primary: Train medical litter teams to negotiate obstacles.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS: Unit will supply all equipment.

C-42. MULTI-PURPOSE FIELD TRAINING SITES (MPFTS) 1, 2

a. CAPABILITIES:

(1) Primary: DEP MEDS.

(2) Alternate: Staging area, BSA.

(3) Ammunition Capability: Blanks, pyrotechnics.

b. SPECIAL INSTRUCTIONS: Unit will add one heat category to Range Control WBGT announcement.

C-43. NBC CHAMBERS (NBC) 1 & 2

a. CAPABILITIES:

(1) Primary: Nuclear, Biological and Chemical training.

(2) Alternate: None

(3) Ammunition Capability: CS (Tear-gas) pellets.

b. SPECIAL INSTRUCTIONS:

(1) Only qualified personnel are allowed to operate the CS Chamber. Qualified Officer in Charge (OIC), must be a SFC above. A minimum of one assistant instructor is required to operate the chamber.

(2) Officer in Charge (OIC) must have a 74A or 54B MOS, or be a graduate of an accredited NBC Defense Course IAW AR 350-41, Chapter 11. Those MOS 54B soldiers who are not BNCOC graduates are also required to have completed the two-week NBC Defense Course

(3) Unit will have at least a qualified combat lifesaver available.

(4) Insure all participants' protective mask is checked for proper fit and seal prior to the beginning of chamber practice.

(5) The OIC must ensure that all participants medical records are screened prior to exposure to CS.

(6) Wearing of contact lenses is PROHIBITED during CS chamber exercises.

(7) Ensure there is an adequate supply of water on hand to reduce heat-related injuries and to be used for decontamination.

(8) The OIC must complete the Qualification Statement when signing for the NBC Chamber and the NBC Chamber Safety Checklist before using the CS Chamber. The checklist is a Range Control inspection item when conducting unit checks. Examples of both forms are located in Appendix H (Forms) of this regulation.

C-44. PHYSICAL TRAINING SITE (PT)

a. CAPABILITIES:

(1) Primary: Army Physical Fitness Test Site.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS: Units must have a minimum of combat lifesaver present.

C-45. RAPPEL TOWERS (RT) 12, 34, 55 FOOT

a. CAPABILITIES:

(1) Primary: Test of individual mental and physical confidence. The rappel tower gives soldiers confidence in their mental and physical ability, cultivates spirit and daring, promotes teamwork and provides a challenge to the small unit leader.

(2) Alternate: None.

(3) Ammunition Capability: None.

b. SPECIAL INSTRUCTIONS:

(1) The OIC/Safety Officer completes the Rappelling Checklist and conducts the safety briefing before training is conducted.

(2) Negotiation of the tower walls requires the use an air assault qualified or school trained instructor for police departments. The aircraft sides of the 55 foot tower requires a rappel master qualified OIC/RSO. The OIC will complete the Rappel Tower Certification Statement when drawing the range packet or attach the statement to the Fort McCoy Form 38A when requesting the facility.

(3) Training on the course is postponed when tower is wet or slippery.

(4) Unit supplies the following equipment:

(a) Rappelling rope, 7/16 diameter, 3 strand, multi-filament twisted rope with a right hand lay. Sling Ropes. Ropes and sling ropes cannot have excess wear, cuts exceeding 1/2 of one strand, fraying, mildew, presence of petroleum products or any disruption in the strands of the right hand lay. Rope must be of sufficient length to reach the height of the tower with an additional 10 feet on the ground.

(b) Heavy-duty work gloves. Gloves cannot have holes or tears in friction bearing areas, rips or tears in seams or the presence of any petroleum products.

(c) Snap links. Snap links must be checked for spring pressure, proper locking, rust, nicks and burrs, lateral gate movement and presence of gate pin.

(5) Units desiring to use civilian rappelling equipment will submit an exception to policy to Range Operations NLT 30 days prior to use day.

C-46. TRACKED VEHICLE DRIVING COURSE (TVDC)

a. CAPABILITIES:

(1) Primary: Train and test soldiers to drive all U.S. Army tracked vehicles.

(2) Alternate: None

(3) Ammunition Capability: None

b. SPECIAL INSTRUCTIONS: None

C-47. TRAINING AREA 397 (TA 397)

a. CAPABILITIES:

(1) Primary: Tank ditching site.

(2) Alternate: Engineer dig site.

(3) Ammunition Capability: None

b. SPECIAL INSTRUCTIONS: Tank ditches restricted to 50 meters in length.

C-48. VEHICLE RECOVERY SITE (VRS)

a. CAPABILITIES:

(1) Primary: Train vehicle recovery crews.

(2) Alternate: None

(3) Ammunition Capability: None

b. SPECIAL INSTRUCTIONS: None

C-49. WHEELED VEHICLE DRIVING COURSE (WVDC)

a. CAPABILITIES:

(1) Primary: Train and test soldiers to drive all U.S. Army wheeled vehicles (1/4 ton to 5 ton vehicles).

(2) Alternate: None

(3) Ammunition Capability: None

b. SPECIAL INSTRUCTIONS: None

C-50. TRAINING AREAS

a. CAPABILITIES:

(1) Primary: All tactical training areas may be utilized individual tactical training (ITT) and unit exercises.

(2) Alternate: Bivouac sites maybe established in all TAC areas. Foot marches and ambush sites are authorized with prior coordination with Range Operations.

(3) Ammunition Capability: Blank ammunition is authorized in all tactical areas. Pyrotechnics, flares, smoke, and chemical agent CS may be used in selected areas based upon fire conditions. OTHER RESTRICTIONS ARE LISTED BELOW.

b. SPECIAL INSTRUCTIONS:

(1) Pyrotechnics are not allowed in the immediate vicinity of any bivouac site.

(2) All vehicles must move by ground guides when operating within 100 meters of any bivouac site.

(3) Use of flares and other pyrotechnics in the tactical training areas must follow the guidelines of:

(a) Not be used within 100 meters of any road.

(b) Not authorized for use in the immediate vicinity of the established bivouac sites.

(c) Prior to use the OIC verifies fire code restrictions are not in effect with Range Operations and that wind condition and direction do not pose a potential threat or hazard to the surrounding area.

C-51. AERIAL FIRING POINTS

FACILITY	LOCATION
AFP #1	8727 7910
AFP #2	8695 7889
AFP #3	8702 7951

AFP #4	8678 7860
AFP #5	8694 7842
AFP #6	8717 7850
AFP #7	8732 7876
AFP #8	8722 7856
AFP #9	8662 8070

Figure C-1

* NOTE: Running fire is allowed from all AFP's within safety restrictions.

a. CAPABILITIES:

(1) Primary: Single aircraft aerial gunnery.

(2) Alternate: None.

(3) Ammunition Capability: TOW missile (inert warhead), M-385/A1 40mm grenade (TP), 30mm, 20mm, .50 cal ball/tracer, 7.62mm ball/tracer, 2.75 rocket M274, 2.75" rocket (ill) M-257 with MK66 rocket motor.

b. SPECIAL INSTRUCTIONS:

(1) Authorized aircraft are AH-1, AH-64, UH-1, UH-60, and CH-47.

(2) Targets: Refer to Range 29 SOP and Ft McCoy PAM 350-10.

(3) The M267 MPSM will **NOT** be fired on the MPTR.

(4) A laser safety officer (LSO) must be on orders and present when helicopters are using laser range finders (LRFs). The laser safety officer (LSO) cannot operate in the position of range OIC (ROIC) nor Range Safety Officer (RSO) while acting as the LSO.

APPENDIX D
RANGE/FACILITIES MATRIX

<u>SITE</u>	<u>LOCATION</u>	<u>TYPE SITE</u>	<u>AMMUNITION</u>	<u># FIRING POINTS</u> <u>/LANES</u>	<u>REMARKS</u>
RG 1	XJ835786	Combat Pistol Qualification	.22, .38, .40 .45, 9mm, 10mm Shotgun	15 Lanes	Conflicts: RG25, M3, D9
RG 2	XJ830786	Multi-purpose Machine Gun	5.56, 7.62, .50 Cal, All Small Arms	6 Lanes	Conflicts: OP2, (When firing .50 cal:OP12)
RG 4	XJ825788	Arty Direct Lay; Copperhead Firing	105,155mm HE; Copperhead	N/A	Conflicts: Direct Lay - OP2, OP11, OP11A, OP12, OP13A, RG7, RG12, RG17A, RG18, D5, D6, M7, MP302, MP303, MP304, MP305, OP01MP, MP306, MP307,MP308
RG 6	XJ845866	Multi-purpose	.22, .38, .40 Shotgun, 5.56, 7.62, AT4 Sub-cal, 40mm TP,ILL, Smk	N/A	Conflicts: RG13CL, OP11, RG29-4, 29-5, 29-7, 29-8, 29-AH1, 29-AH3, 29-AH7, 29-AH8, (When MLRS live fire:FA02MLRS) Requires Range Operations approval of range plan.
RG 7	XJ820793	M203 Qualification & Familiarization	40mm TP	1 Lane w/ 4 Stations	Conflicts: RG4ADL
RG 8	XJ861863	HG Live Throw Fragmentation, Concussion, Smk Practice Fuzes	Hand Grenade	2 Live Bays 2 Practice Bays	Conflicts: (When MLRS live fire: FA02MLRS), RG29-AH1, 29-AH3, 29-AH7, 29-AH8 Throwers must throw fuzed practice grenade before throwing live grenade.
RG 11	XJ812807	Demolitions (Light) MDI transition	C4, TNT, Dynamite, Det cord	1 Blowhole	Conflicts: D7 Limited to 10 lbs

RG 12	XJ816811	Anti-armor, M203 Familiarization	LAW sub-cal, AT4 sub-cal, 40mm TP,ILL DRAGON sub-cal, SMAW sub-cal	4 Firing points	Conflicts: RG4ADL
SITE	LOCATION	TYPE SITE	AMMUNITION	# FIRING POINTS /LANES	REMARKS
RG 13CL	XJ852858	TOW Live fire, Observation point, Mortar direct fire	TOW inert, Laser w/filter 60mm,81mm,120mm HE	N/A	Conflicts: RG6, MP309, MP310, OP1(Laser w/o filter), RG29-4, 29-5, 29-7, 29-8, 29-12, 29-AH1 29-AH3,29-AH7, 29-AH8, 29-LRF, 29-CAL (When TOW Firing add: RG31, MP312, OP11, OP11A, OP12) (When MLRS live fire: FA02MLRS
RG 15	XJ	Demolitions (Light) MDI transition	C4, TNT, Dynamite, Det cord	1 Blowhole	Conflicts: RG4ADL, 29-4, 29-5, 29-7, 29-8, 29-AH1, 29-AH7, 29-AH8 29-12,29-AH3 Limited to 10 lbs
RG17A	XJ820856	Demolitions (Heavy)	C4, TNT, Dynamite, Det cord, Bangalore torpedo, Shape Cratering	2 Blowholes (1 for steel cutting)	Conflicts: MP308, RG4ADL (When bangalore or over 125 lbs: MP307), Limit 250 lbs, Bangalore limited to two sections, steel cutting max 2 lbs
RG 18	XJ830866	MG & SAW Familiarization	5.56, 7.62, .50 CaL	3 Firing points 7 10-meter points	Conflicts: D5, (When firing .50 Cal: OP2), RG4ADL
RG 26	XJ847789	MICLIC, Mortar sub-cal	MICLIC inert, Mortar sub-cal	N/A	Conflicts: ES24
RG 29	XJ866782	Tank & Bradley Table VI to XII; Aerial Gunnery Table I-VIII; TOW Gunnery;LRF; Door Gunnery; MG; AF Strafing; Mortar ILL	5.56, 7.62, .50 Cal, 20mmTP,TPT; 25mm TPT,TPDST; 30mmTPT; SMAW TP, TOW inert; 40mmTP; 105mmTP; 120HETPT,APCSDST 2.75 Rkts 60mm,81mm,120mm ILL	2 Lanes	Conflicts: SEE NOTE 1 Coordination with RETS Branch required for use.

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RG 29A	XJ854809	Anti-armor, M203, MK19 Familiarization	DRAGON, 40mm, SMAW,LAW AT4	1 Lane	Conflicts: RG29 (All), (When MLRS live fire: FA02MLRS)
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<u>SITE</u>	<u>LOCATION</u>	<u>TYPE SITE</u>	<u>AMMUNITION</u>	<u># FIRING POINTS</u> <u>/LANES</u>	<u>REMARKS</u>
RG 31	XJ873828	Rifle Qualification	.22, .38, .40 .45, 9mm, 10mm Shotgun, 5.56	16 Lanes 10 Zero Lanes	Conflicts: RG29-AH1, RG29-AH3, 29-AH7, 29-AH8 (RG13CL when firing TOW)
RG 32	XJ877828	Modified Rifle Record Fire	.22, .38, .40 .45, 9mm, 10mm 5.56	16 Lanes	Conflicts: Tank Trail
RG 33	XJ872845	25 meter multi- purpose	.22, .38, .40 .45, 9mm, 10mm Shotgun, 5.56	100 Firing points	Conflicts:29-AH7, 29-AH8
RG 34	XJ875856	MG Transition & SAW familiariza- tion	5.56, 7.62, .50 Cal	6 Field fire points 20 Zero points	Conflicts:(When firing .50 cal: (When MLRS live fire: FA02MLRS) 50 Cal must zero and fire from left two points of field fire side
RG 35	XJ874859	M203 Familiarization	40mm HE	4 Firing points	Conflicts: RG29-AH3, 29-AH7 29-AH8, (When MLRS live fire: FA02MLRS)
RG 36	XJ878855	TOW & DRAGON Tracking	ATWESS Cartridges	N/A	Conflicts: FA04
RG 100	XJ819678	25 meter multi- purpose	.22, .38, .40 Shotgun, 5.56	30 Firing points	Conflicts: A1, A2
RG 101 RG 101KD	XJ808678	Automated rifle record fire, Known distance	.22, .38, .40 .45, 9mm, 10mm Shotgun, 5.56	16 Firing points	Conflicts: A1, A2
RG 102	XJ804678	25 meter multi-	.22, .38, .40, 45, 9mm, 10mm Shotgun	32 Firing points	Conflicts: A1, A2
RG 105	XJ825675	Skeet Range for Rod & Gun Club	Shotgun	N/A	Conflicts: A2

NOTE 1: RG 29 Conflicts

29-CAL ALL OTHER RG 29, RG13CL, RG29A, OP2, OP6, OP11, OP11A, M2, M3, M4, M7

29-DG ALL OTHER RG 29, RG29A, OP6, M2, M3, M4

29-DRY ALL OTHER RG 29

29-LRF ALL OTHER RG 29, OP6, OP11, OP11A, RG13CL, RG29A, M2, M3, M4

- 29-4** ALL OTHER RG 29, RG29A, RG6, R13CL, RG15, MP305, MP306, MP307, MP309, OP2, OP6, OP11, OP11A, OP12, D5, D6, M2, M3, M4, M7
- 29-5** ALL OTHER RG 29, RG29A, RG6, RG13CL, RG15, MP305, MP 306, MP 307, MP309, MP312 OP2, OP6, OP11, OP11A, OP12, M2, M3, M4, M5, M7, D5, D6
- 29-7** ALL OTHER RG 29, RG29A, RG6, RG13CL, RG15, MP305, MP306, MP 307, MP309, MP310, OP2, OP6, OP11, OP11A, OP12, D5, D6, M2, M3, M4, M7
- 29-8** ALL OTHER RG 29, RG29A, RG6, RG13CL, RG15, MP305, MP306, MP307, MP309, MP310, OP2, OP6, OP11, OP11A, OP12, D6, M2, M3, M4, M7
- 29-12** ALL OTHER RG 29, RG29A, RG13CL, RG 15, MP305, MP306, MP307, MP312, OP2, OP6, OP11, OP11A, M2, M3, M4, M5, M7
- 29-AH1** ALL OTHER RG 29, RG29A, RG6, RG8, RG13CL, RG15, RG31, MP305, MP306, MP307, MP309, MP310, MP312, OP2, OP6, OP11, OP11A, OP12, HGQC, D5, D6, M1, M2, M3, M4, M5, M6, M7
- 29-AH2** ALL OTHER RG 29, RG29A, OP2, OP6, OP13A, M1, M2, M3, M4
- 29-AH3** ALL OTHER RG 29, RG29A, RG6, RG13CL, RG15, RG8, RG 31, RG35, HGQC, MP305, MP306, MP307, MP309, MP310, MP311, MP312, OP2, OP6, OP11, OP11A, OP12, D5, D6, M1, M2, M3, M4, M5, M6, M7
- 29-AH4** ALL OTHER RG 29, RG29A, OP6, M1, M2, M3, M4
- 29-AH7** ALL OTHER RG 29, RG29A, RG6, RG8, RG13CL, RG15, RG31, RG33, RG34, RG35, HGQC, MP305, MP306, MP307, MP309, MP310, MP311, MP312, OP2, OP6, OP11, OP11A, OP12, D5, D6, M1, M2, M3, M4, M5, M6, M7
- 29-AH8** ALL OTHER RG 29, RG29A, RG6, RG8, RG13CL, RG15, RG31, RG33, RG34, RG35, HGQC, MP305, MP306, MP307, MP309, MP310, MP311, MP312, OP2, OP6, OP11, OP11A, OP12, D5, D6, M1, M2, M3, M4, M5, M6, M7
- 29-HAIR** ALL OTHER RG 29, RG29A, OP2, M2, M3, M4
- 29-MG** ALL OTHER RG 29, RG29A, OP6, M2, M3, M4
- 29-TOW** ALL OTHER RG 29, RG29A, RG31, OP6, MP312, C6, C8, M2, M3, M4, M5

<u>SITE</u>	<u>LOCATION</u>	<u>TYPE SITE</u>	<u>AMMUNITION</u>	<u># FIRING POINTS</u> <u>/LANES</u>	<u>REMARKS</u>
ALDER- WOOD	XJ87684	Water crossing site	N/A	N/A	Conflicts: ES5 Life jacket required
ATF	XJ837759	Airborne Training Facility	N/A	34FT Tower Swing landing trainer	Conflicts: None Must be jumpmaster qualified
BADGER	XJ875705	Drop Zone personnel & bundle drops	Smoke, blanks, pyrotechnics	2360m x 1170m	Conflicts: B19, Young Must be DZO qualified. Ammo requires approval from Range Division
BAC	XJ835760	Bayonet Assault Course	Bayonets	6 Lanes	Conflicts: None
BTC	XJ835758	Bayonet Training Court	Bayonets	40 Targets	Conflicts: None
CC1	XJ898735	Compass Course	N/A	58 Test Lanes	Conflicts: B25, B26, B27, FA06
CC2	XJ903672	Compass Course	N/A	30 test lanes	Conflicts: A5, A6
CC3	Due FY 2000	Compass	N/A	30 test lanes	Conflicts: C17,

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		Course			FA02MLRS (When MLRS live fire), FA03 TA397 (When off range demo) FP406
<u>SITE</u>	<u>LOCATION</u>	<u>TYPE SITE</u>	<u>AMMUNITION</u>	<u># FIRING POINTS</u> <u>/LANES</u>	<u>REMARKS</u>
CRAN-BERRY	XJ819899	Drop zone personnel & bundle drops	Smoke, blanks, pyrotechnics	600m x 600m	Conflicts: D2, FA01, FP401, FP402, FP403 Must be DZO qualified. Ammo requires approval from Range Division
COND	XJ838754	Conditioning Course	N/A	15 Obstacles	Conflicts: None
CONF	XJ835757	Confidence Course	N/A	25 Obstacles	Conflicts:
DECON	XJ883841	Decontamination Site	Blanks, pyrotechnics	N/A	Conflicts: None
EPW1	XJ871775	Prisoner of war training site	Blanks, pyrotechnics	N/A	Conflicts: T-BB
EPW2	XJ901693	Prisoner of war training site	Blanks, pyrotechnics	N/A	Conflicts: B11
ES1	XJ852784	Engineer site	Blanks, pyrotechnics	Wood trestle bridge (dry span)	Conflicts: None Pyrotechnics require Range Operations approval.
ES5	XJ876840	Engineer Site	N/A	Float bridge site (wet)	Conflicts: Alderwood Life jacket required
ES15	XJ851783	Engineer Site	Blanks, Pyrotechnics	Bailey bridge site (dry)	Conflicts: Pyrotechnics require Range Operations approval
ES16	XJ839770	Engineer Site	N/A	Float bridge site (dry)	Conflicts: None
ES24	XJ847789	Engineer Site	N/A	Dig site	Conflicts: RG26
HGQC	XJ853867	Hand grenade Qualification	Practice fuzes	1 Lane 6 Stations	Conflicts: D6, 29-AH1, 29-AH3, 29-AH7, 29-AH8, FA02MLRS (When MLRS live fire)
IBDC	XJ831758	Infantry battle drill course	Blanks, pyrotechnics	9 Squad/3 Platoon Lanes: mine clearing, wire obstacles, trench system, bunkers	Conflicts: None Pyrotechnics require Range Operations approval
LOC	XJ882763	Litter obstacle	Blanks	Lane w/6 obstacles	Conflicts: None Pyrotechnics require Range Operations approval.
MPFTS1	XJ907745	Multi-purpose training area	Blanks, pyrotechnics	N/A	Conflicts: None Pyrotechnics require

					Range Operations approval
MPFTS2	XJ902838	Multi-purpose training area	Blanks, pyrotechnics	N/A	Conflicts: None Pyrotechnics require Range Operations approval
SITE NBC1	LOCATION XJ868773	TYPE SITE NBC training site	AMMUNITION CS powder or pellets	# FIRING POINTS /LANES NBC chamber	REMARKS Conflicts: None OIC must be school trained NBC
NBC2	XJ876844	NBC training site	CS powder or pellets	NBC chamber	Conflicts: None OIC must be school trained NBC
RBTS	XJ838763	Rope bridge site	N/A	6 bridge sites	Conflicts: None Unit must provide rope and snap links
RT12,34,55	XJ838762	Rappel towers	N/A	3 towers: 12 foot, 34 foot, 55 foot	Conflicts: None OIC and RSO must be Air Assault qualified for wall side, Rappel Master for aircraft side. Police Departments must be school trained.
TVDC	XJ874728	Track vehicle driver's course	N/A	Trails	Conflicts: None
WVDC	XJ839751	Wheeled vehicle driver's course	N/A	Road network paved and unpaved	Conflicts: None
VRS	XJ877729	Vehicle Recovery site	Blanks, pyrotechnics	Recoverable vehicles on site	Conflicts: None
YOUNG	XJ870695	Air assault strip, drop zone Up to C130	Smoke grenades	3500ft x 60ft gravel surfaced runway 300ft overrun DZ 1760m x780m	Conflicts: Badger, B19 Combat Contol Team required to use runway DZ requires DZSO
WARRENS	XJ905905	Drop Zone personnel & bundle drops, MICLIC, Volcano, Mortar Sub-cal	Blanks,Smoke pyrotechnics MICLIC Inert Mortar sub-cal Volcano inert	1100m x 765m	Conflicts: FA02, FA02MLRS, FA03, FP409, FP411, FP410, C20, RRAS, FP408. Must be DZO qualified Ammo requires approval by Range Division
RRAS	XJ888908	Rapid runway Repair, Construction, destruction charge, cratering	C4, TNT, Dynamite, Det cord, Shape	N/A	Conflicts: FA02, FA02MLRS, C19, Warrens. Demolitions require Range Division approval
FA01	See Appendix F	Paladin live fire, MLRS FTX	HE, WP, SMK, Illumination,Blanks, pyrotechnics	N/A	Conflicts: FP401, FP402, FP403, Cranberry, D1,D2,D3

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FA02	See Appendix F	Paladin live fire,	HE, WP, SMK, Illumination,Blanks, pyrotechnics	N/A	Conflicts: FP407, FP408, FP409, Warrens, FA02MLRS, C19, C20, C21, RRAS
SITE	LOCATION	TYPE SITE	AMMUNITION	# FIRING POINTS /LANES	REMARKS
FA02MLRS	See Appendix F	MLRS live fire,FTX	Practice rocket Blanks, pyrotechnics	N/A	Conflicts: FP407, FP408, FP409, Warrens, FA02, C18, C19, C20, C21, RRAS When live fire add: RG6, RG8, RG13CL, RG29A, RG34, RG35, HGQC, OP11, OP11A, FP404, FP405, FP406, FP410, FP411, MP309, MP310, MP311, C14, C15, C16,C17,D4,D6, M6,TA397,CC3
FA03	See Appendix F	Paladin live fire, MLRS FTX	HE, WP, SMK, Illumination,Blanks, pyrotechnics	N/A	Conflicts: FP404, FP405, FP406, FP410, FP411, CC3, TA397, C14, C15, C16, C17 Warrens
FA04	See Appendix F	Paladin live fire, MLRS FTX	HE, WP, SMK, Illumination,Blanks, pyrotechnics	N/A	Conflicts: FP412, FP413, FP414, RG36, DECON, C10, C11, C12, C13,
FA05	See Appendix F	Paladin live fire, MLRS FTX	HE, WP, SMK, Illumination,Blanks, pyrotechnics	N/A	Conflicts: FP416, FP417, FP418, C3, C4, C5, C7
FA06	See Appendix F	Paladin live fire, MLRS FTX	HE, WP, SMK, Illumination,Blanks, pyrotechnics	N/A	Conflicts: FP421, FP422, FP423, C1, B26, B27, B33, CC1, MPFTS1, Live firing requires Range Control approval. Firing only on north side of HWY 21
FP401	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA01, Cranberry
FP402	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA01, Cranberry
FP403	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA01, Cranberry
FP404	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA03, FA02MLRS (When MLRS live fire)

FP405	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA03, C14, FA02MLRS (When MLRS live fire)
SITE FP406	LOCATION See Appendix F	TYPE SITE Artillery firing point	AMMUNITION HE, WP, SMK, Illumination;Blanks, pyrotechnics	# FIRING POINTS /LANES N/A	REMARKS Conflicts: FA03, CC3 FA02MLRS (When MLRS live fire)
FP407	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA02, FA02MLRS,
FP408	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA02, FA02MLRS, Warrens
FP409	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA02, FA02MLRS, Warrens
FP410	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA03, Warrens, FA02MLRS (When MLRS live fire)
FP411	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA03, Warrens, FA02MLRS (When MLRS live fire)
FP412	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA04
FP413	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA04
FP414	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA04
FP415	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: None
FP416	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA05
FP417	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA05
FP418	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks,	N/A	Conflicts: FA05

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pyrotechnics					
FP420	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: None
FP421	See Appendix F	Artillery firing point	HE, WP, SMK, Illumination;Blanks, pyrotechnics	N/A	Conflicts: FA06
SITE FP422	LOCATION See Appendix F	TYPE SITE Artillery firing point dry fire	AMMUNITION Blanks, pyrotechnics	# FIRING POINTS /LANES N/A	REMARKS Conflicts: FA06
FP423	See Appendix F	Artillery firing point dry fire	Blanks, pyrotechnics	N/A	Conflicts: FA06
MP01	See Appendix F	Mortar firing	ILL	N/A	Conflicts: NONE
MP302	See Appendix F	Mortar firing point	HE, WP, ILL	N/A	Conflicts: RG4ADL
MP303	See Appendix F	Mortar firing point	HE, WP, ILL	N/A	Conflicts: OP13A, RG4ADL
MP304	See Appendix F	Mortar firing point	HE, WP, ILL	N/A	Conflicts: OP2, RG4ADL
MP305	See Appendix F	Mortar firing point	HE, WP, ILL	N/A	Conflicts: RG16, 29-5, 29-7, 29-8, 29-AH1, 29-AH7, 29-AH8, RG4ADL, 29-CAL,29-12, 29-AH3
MP306	See Appendix F	Mortar firing point	HE, WP, ILL	N/A	Conflicts:RG17, RG29-4, 29-5, 29-7, 29-8, 29-AH1, 29-AH3, 29-AH7, 29-AH8, RG4ADL, 29-CAL,29-12
MP307	See Appendix F	Mortar firing point	HE, WP, ILL	N/A	Conflicts: RG4ADL, (RG17A when bangalore or over 125 lbs), 29-AH7, 29-AH8, 29-AH1, 29-AH3, 29-4,29-CAL, 29-5,29-7, 29-8,29-12
MP308	See Appendix F	Mortar firing point	HE, WP, ILL	N/A	Conflicts: RG17A
MP309	See Appendix F	Mortar firing point	HE, WP, ILL	N/A	Conflicts: RG6, RG13CL, OP11A, RG29-4, 29-5, 29-7, 29-8, 29-AH1, 29-AH3, 29-AH7, 29-AH8, (When MLRS Live fire: FA02MLRS)
MP310	See Appendix F	Mortar firing	HE, WP, ILL	N/A	Conflicts: RG6,

point

RG13CL, OP11A,
RG29-7, 29-8,
29-AH1, 29-AH3,
29-AH7, 29-AH8,
(When MLRS live
fire: FA02MLRS)

<u>SITE</u>	<u>LOCATION</u>	<u>TYPE SITE</u>	<u>AMMUNITION</u>	<u># FIRING POINTS</u> <u>/LANES</u>	<u>REMARKS</u>
MP311	See Appendix F	Mortar firing point	HE, WP, ILL	N/A	Conflicts: RG13CL, RG29-AH3, 29-AH7, 29-AH8 (When MLRS live fire: FA02MLRS)
MP312	See Appendix F	Mortar firing point	HE, WP, ILL	N/A	Conflicts: RG29-5, 29-12, 29-AH1, 29-AN3, 29-AH7, 29-AH8, 29TOW RG13CL when firing TOW)
OP1	See Appendix F	Observation point	Laser	N/A	Conflicts: (When lasing w/o filter: OP11, OP11A, RG13CL
OP1MP	See Appendix F	Observation point	Laser w/filter	N/A	Conflicts: (When lasing w/filter: RG2, RG4ADL)
OP2	See Appendix F	Observation point Mortar firing	Laser w/filter 60mm HE, WP, SMK Illumination	N/A	Conflicts: RG29-CAL, 29-4, 29-5, 29-7, 29-8, 29-12, 29-AH1, 29-AH2, 29-AH7, 29-AH8, 29-HAIR, RG4ADL, RG2, (When firing .50 cal RG18, RG34). 29-AH3
OP6	See Appendix F	Observation point	Laser w/filter	N/A	Conflicts: RG29-CAL, 29-4, 29-5, 29-7, 29-8, 29-12, 29-AH1, 29-AH2, 29-AH7, 29-AH8, 29-HAIR, 29-AH3, 29-LRF, 29-TOW, 29-AH4, 29-DG, 29-MG
OP11	See Appendix F	Observation point	Laser w/filter	N/A	Conflicts: RG29-CAL, 29-4, 29-5, 29-7, 29-8, 29-12, 29-AH1, 29-AH7, 29-LRF 29-AH8, 29-AH3, RG6, RG4ADL (When MLRS live fire FA02MLRS), (When TOW fired RG13CL)(OP1 When full laser)
OP11A	See Appendix F	Observation point	Laser w/filter 60mm HE, WP, SMK	N/A	Conflicts: RG29-CAL, 29-4,

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		Mortar firing	Illumination		29-5, 29-7, 29-8, 29-12, 29-AH1, 29-AH7, 29-LRF, 29-AH8, 29-AH3, RG6, RG4ADL (When MLRS live fire FA02MLRS), (When TOW fired RG13CL), MP309, (OP1 when full laser)
<u>SITE</u>	<u>LOCATION</u>	<u>TYPE SITE</u>	<u>AMMUNITION</u>	<u># FIRING POINTS</u> <u>/LANES</u>	<u>REMARKS</u>
OP12	See Appendix F	Observation point	Laser w/filter	N/A	Conflicts: RG29-7, 29-8, 29-AH1, 29-AH3, 29-AH7, 29-AH8, (When TOW firing RG13CL),(When firing .50cal RG2), RG4ADL,29-CAL, 29-4, 29-5
OP13A	See Appendix F	Observation point Mortar firing	Laser w/filter 60mm HE, WP, SMK Illumination	N/A	Conflicts: 29-AH2, MP303 RG4ADL
RG 25		RG MAINT STORAGE			Conflicts: RG1

TRAINING AREA CONFLICTS:

A1 RG100, RG101, RG101KD, RG102

A2 RG100, RG101, RG101KD, RG102, RG105

A5 CC2

A6 CC2

B11 EPW2

B19 BADGER, YOUNG

B25 CC1

B26 CC1, FA06

B27 CC1, FA06

B33 FA06

C1 FA06

C3 FA05

C4 FA05

C5 FA05

C6 RG29-TOWA&G

C7 RG29-TOWA&G, FA05

C10 FA04

C11 FA04
C12 FA04
C13 FA04
C14 FA02MLRS (WHEN MLRS LIVE), FA03
C15 FA02MLRS (WHEN MLRS LIVE), FA03
TRAINING AREA CONFLICTS:
C16 FA02MLRS (WHEN MLRS LIVE), FA03
C17 CC3, FA03, FA02MLRS (When MLRS live)
C18 FA02, FA02MLRS,
C19 RRAS, FA02, FA02MLRS
C20 WARRENS, FA02, FA02MLRS
C21 FA02, FA02MLRS
D1 FA01
D2 CRANBERRY, FA01
D3 FA01
D4 FA02MLRS (WHEN MLRS LIVE),
D5 RG4ADL, RG17A, RG18, RG29-4, RG29-5, RG29-7, RG29-AH1, RG29-AH3, RG29-AH7, RG29-AH8, MP308
D6 RG4ADL, RG6, RG29-4, RG29-5, RG29-7, RG29-8, RG29-AH1, RG29-AH3, RG29-AH7, RG29-AH8, HGQC, MP309, MP310, FA02MLRS (WHEN MLRS LIVE)
D7 RG11
D9 RG1
M1 RG29-AH2, RG29-AH3, RG29-AH4, 29-AH5, 29-AH7, 29-AH8, FP420
M2 ALL RG29 EXCEPT DRY
M3 ALL RG29 EXCEPT DRY, RG1
M4 ALL RG29 EXCEPT DRY
M5 RG29-5, RG29-12, RG29-AH1, 29-AH3, RG29-AH7, RG29-AH8, RG29-TOW, RG31, RG32, MP312
M6 RG29-AH1, RG29-AH3, RG29-AH7, RG29-AH8, FA02MLRS (WHEN MLRS LIVE), FP404, MP311
M7 RG4ADL, RG15, RG16, RG17, RG29-CAL, RG29-4, RG29-5, RG29-7, RG29-8, RG29-12, RG29-AH1, RG29-AH3, RG29-AH7, RG29-AH8, MP305, MP306, MP307
TA397 FA02MLRS (WHEN MLRS LIVE), FA03, (When using off range demo: CC3)

THE FOLLOWING RANGES HAVE DOWNRANGE CONFLICTS AS INDICATED. ALL PERSONNEL MUST CALL RANGE OPERATIONS BEFORE GOING DOWN RANGE.

<u>RANGE</u>	<u>CONFLICT</u>
2	OP1/OP1MP (WHEN USING LASER); RG4ADL; RG9; RG10; RG12; RG18(.50 CAL); RG29TOWA/G; RG29-HAIR, RG1
4ADL	RG2;RG18 (50 CAL)
12	RG29-AH2
18	RG29-4; RG29-5; RG29-7; RG29-AH1; RG29-AH3; RG29-AH7; RG29-AH8
26	RG1
31	RG29-12
32	RG29-12; RG29-AH3; RG29-AH7; RG29-AH8
33	RG29-12; RG29-AH3
34	RG29-12; RG29-AH1; RG29-AH3
101/101KD	RG102

WEAPON MATRIX

BY CALIBER (RG):

22 CAL 1, 6, 31, 32, 33, 100, 101, 102

38 CAL 1, 6, 31, 32, 33, 100, 101, 102

40 CAL 1, 6, 31, 32, 33, 100, 101, 102

45 CAL 1, 6, 29, 31, 32, 33, 100, 101, 102

9MM 1, 6, 29, 31, 32, 33, 100, 101, 102

10MM 1, 6, 31, 32, 33, 100, 101, 102

5.56MM (M16) 6, 29, 31, 32, 33, 100, 101, 102

5.56 MM M249 SAW 2, 6, 18, 29, 34

7.62MM (M60) 2, 6, 18, 29, 34

.50 CAL (M2) 2, 18, 29, 34

SHOTGUN 1, 6, 31, 32, 33, 100, 101, 102

HAND GRENADE 8

20MM TP, TPT 29

25MM TPT, TPDST 29

BY CALIBER (RG):

30MM TPT 29

**40MM GRENADE LAUNCHER M203 HE 35
TP 6, 7, 12, 29,
ILL 6, 12
SMK 6,**

**40MM GRENADE LAUNCHER MK19 HE 29A
TPT 29, 29A**

AT4 29A

AT4 (9MM SUB-CAL) 6, 12, 29A

TOW INERT 13CL, 29

**DRAGON PRACTICE 12, 29A
SERVICE 29A**

**SMAW SUB-CAL 12, 29, 29A
SERVICE 29A**

LAW 29A

LAW SUB CAL 12, 29A

DEMOLITIONS 11, 15, 17A

DOOR GUNNERY 29-DG

105MM TPT 29

120MM TPT, APCSDST 29

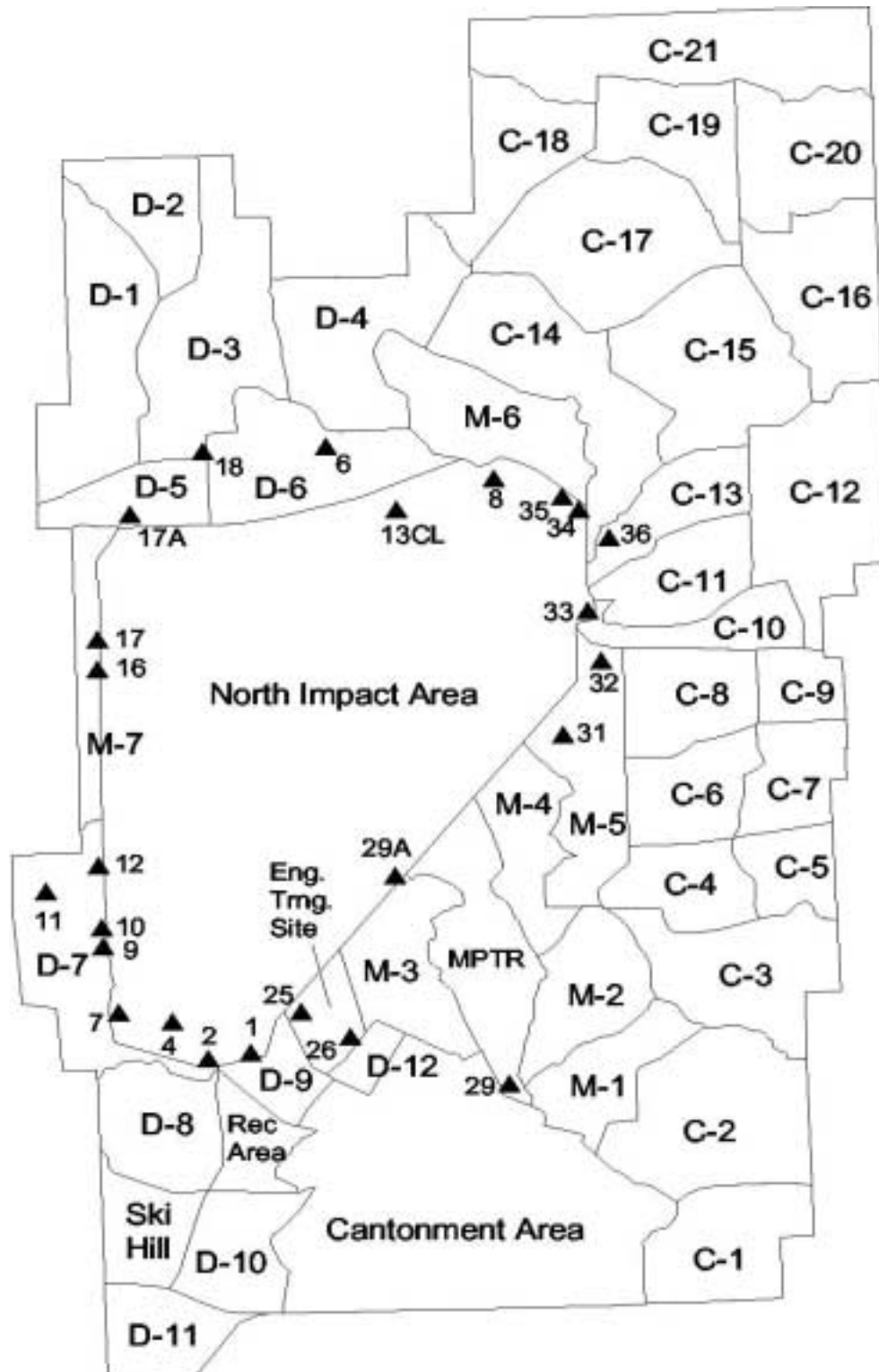
MICLIC INERT RG26, WARRENS

MORTAR SUB -CAL RG26, RG34, WARRENS

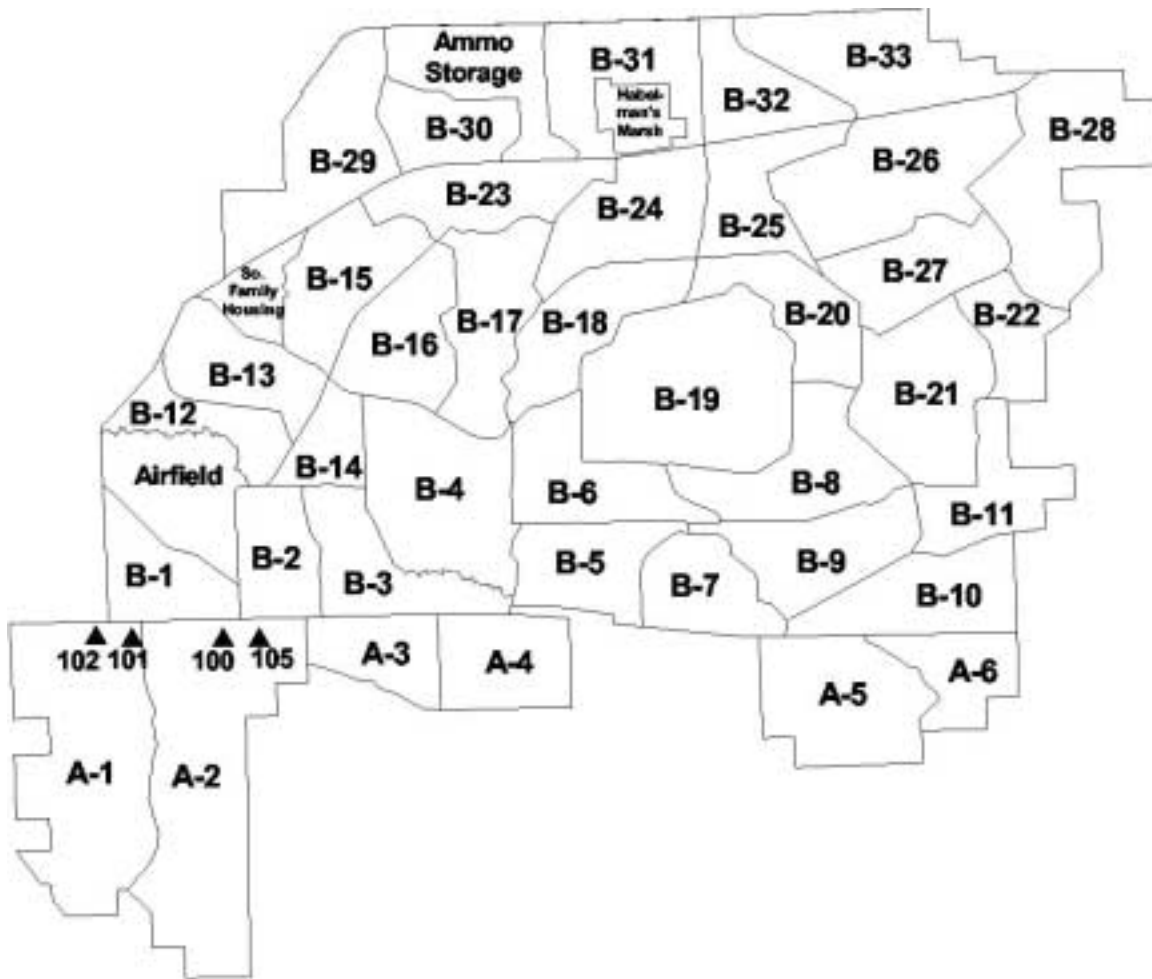
2.75 ROCKET BLUE 29

**ALL OTHER WEAPONS/LOCATIONS (NOT ARTILLERY OR MORTAR ON FIRING POINTS) AND
ALL OFF RANGE FIRING REQUIRES RANGE CONTROL APPROVAL!**

**APPENDIX E
LOCATOR MAPS**



Training Areas and Ranges – North Post



Training Areas and Ranges – South Post

APPENDIX F
INDIRECT FIRE DATA

F-1. ARTILLERY FIRING POINT LOCATIONS

<u>AFP</u>	<u>EASTING</u>	<u>NORTHING</u>	<u>ALT</u>	<u>REMARKS</u>
401	81673.5	90184.9	+282.8	
402	82695.9	88495.8	+291.2	
403	82071.1	87741.7	+298.0	
404	86253.2	87636.9	+305.3	
405	87251.9	87868.9	+307.3	
406	88391.5	90055.8	+296.4	
407	87904.0	91470.8	+303.4	
408	88900.1	91239.8	+299.4	
409	90699.9	90591.0	+318.7	
410	90578.9	89682.2	+317.3	
411	89664.3	88858.3	+310.4	
412	90787.3	87113.6	+306.3	
413	89251.4	86446.1	+301.3	
414	90130.8	84055.3	+300.4	
415	89905.4	83125.9	+308.0	
416	89532.9	81652.9	+307.6	
417	88937.0	81258.2	+300.2	
418	88011.0	80577.9	+295.9	
420	87868.9	78323.9	+291.6	
421	89165.6	76620.3	+282.2	
422	90015.5	74278.2	+291.8	Dry Fire Only
423	90964.2	72375.6	+312.5	Dry Fire Only

F-2. ARTILLERY FIRING AREAS

<u>FA</u>	<u>TRAINING AREAS</u>	<u>REMARKS</u>
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FORT McCOY REGULATION 350-1

FA 01	D1, D2, D3	PALADIN LIVE FIRE, MLRS FTX
FA 02	C19, C20, C21	PALADIN LIVE FIRE
FA02MLRS	C19, C20, C21	MLRS LIVE FIRE
FA 03	C16, C17	PALADIN LIVE FIRE, MLRS FTX
FA 04	C10, C11, C12, C13	PALADIN LIVE FIRE, MLRS FTX
FA 05	C3, C4, C5, C7	PALADIN LIVE FIRE, MLRS FTX
FA 06	B26, B27, B33, C1	PALADIN/MLRS FTX (NOTE 1)

NOTE 1 - FA06 Requires Range Control Coordination for Paladin live fire in C1

F-3. MORTAR FIRING POINT LOCATIONS

MFP EASTING NORTHING ALT REMARKS

MP01	86036.0	79079.0	+278.3	Located on MPTR, Illumination only
302	81768.9	80700.1	+308.3	
303	81751.5	81355.7	+303.9	
304	81754.0	81865.9	+312.9	
305	81756.4	83704.3	+323.8	
306	81748.8	84314.3	+330.0	
307	81741.8	85208.6	+336.9	
308	81906.3	85947.3	+310.4	
309	84994.0	86051.6	+318.9	
310	85576.0	86302.2	+311.2	
311	86804.0	86368.2	+295.7	
312	86923.8	82581.2	+301.9	

F-4. OBSERVATION POINTS

OP EASTING NORTHING ALT REMARKS

OP1	82595.7	78539.3	+327.6	FULL LASER CAPABLE**
OP2	82531.9	82502.1	+358.4	
OP6	86937.0	82121.5	+353.4	
OP10				COMPLETED FY 2000
OP11*	84033.1	85671.1	+366.2	
OP11A	8438	8539		NOT SURVEYED
OP12	81942.4	84569.0	+377.9	
OP13A	82049.0	81522.0	+353.3	
RG13CL	85290.0	85756.4	+361.4	

NOTES:

* Must be scheduled separately from OP11

** All Observation Points are laser capable with filter installed.

F-6. DECLINATION STATION DATAa. **GENERAL:** There are four declination stations located on Fort McCoy.

- (1) Declination Station 01: Located at coordinates 902 914
- (2) Declination Station 02: (To be completed FY 2000)
- (3) Declination Station 03: Located at coordinates 891 770
- (4) Declination Station 04: (To be completed FY 2000)

b. **DECLINATION STATION DIAGRAMS (DA Form 1959):** Diagrams for all sites are in Fort McCoy Trig List and may also be obtained from Range Operations.**F-6. SAMPLE CERTIFICATION ROSTER**

WISCONSIN ARMY NATIONAL GUARD

HQ, 1st Bn 111th FA
3267 Any Street
Hometown, WI 12345-6789

ZNGTR (385-1)

1 January 2000

MEMORANDUM FOR Commander, ATTN: AFRC-FM-TMR (Range Division), 110
East Headquarters Road, Fort McCoy, WI 54656-5226

SUBJECT: Safety Certification Appointment

1. Effective 1 Jan 00 the below listed personnel were command certified per AR 385-63, para. 11-2 on the M109A5 weapon system:

NAME	LAST FOUR	RANK	POSITION	BTRY	CERTIFIED
JONES, JAMES L.	XXXX	CPT	BN FDO	HHB	OIC/RSO
SMITH, JOHN J.	XXXX	1LT	BTRY XO	ALPHA	OIC/RSO
PITT, JIM X.	XXXX	SFC	GUNNERY SGT	ALPHA	OIC/RSO
WILL, JOHN W.	XXXX	SSG	SECTION CHIEF	ALPHA	RSO

2. The point of contact is SFC Ox, (608) 555-3456.

ABLE C. COW
LTC, FA
Commanding

APPENDIX G
EXAMPLE LASER SAFETY BRIEFING

The laser system, except for its inability to penetrate targets, must be treated as a direct-fire, line of sight weapon such as a rifle or machine-gun. Safety precautions taken for a direct fire weapon will provide most aspects of the safety environment required for the laser.

The additional hazard from laser devices is limited to exposure to unprotected eyes of individuals within the direct laser beam or the direct laser beam reflected from specular surfaces. Serious eye damage with permanent impairment of vision can result to unprotected personnel exposed to the laser beam at ranges less than the Nominal Ocular Hazard Distance (NOHD).

The NOHD for direct intrabeam viewing is the distance beyond which an unprotected individual may stand in the beam and be exposed without injury, provided he/she does not look at the laser with unfiltered magnifying optical devices. The hazardous range is greatly increased when viewing the collimated beam with a telescope, field glasses or other magnifying optics. For instance, the NOHD for the AN/GVS is 1100 meters. This would increase to 8500 meter for an individual looking back at the laser from within the beam using field glasses.

No unprotected personnel are permitted in the Laser Surface Danger Zone. Personnel who are required to be in the surface danger zone must wear protective eyewear as prescribed in TB Med 524 and AR 385-63.

Essentially the laser beam travels in a straight line, and as the NOHD for most lasers exceeds the dimensions of the impact area, it is necessary to provide a backstop, such as a hill behind the target, during laser operations. Thus reducing the true hazardous range to the distance to the target or the backstop behind the target.

Only those targets specified for lasing from a specific firing point will be used. The inadvertent or intentional tracking of non-target vehicles or aircraft is prohibited.

Warning signs will be posted on access roads to ranges that may be within the NOHD for magnified optics. All personnel must be aware of the danger of possible eye injury if proper precautions are not followed. All personnel must be warned to report any eye exposure to the LRSO or OIC immediately and informed of the need to have an eye exam within 24 hours of exposure.

Do not operate the laser until you have read and understood all operating and safety instructions in the appropriate TM.

Do not aim the laser at yourself or anyone else.

Never look into the front of the laser. Treat it as you would the muzzle of your weapon. Because some lasers are handheld and most are not utilized often, it is easy to forget they are dangerous devices and ignore the safety warnings. Do not forget the laser beam can cause blindness.

Only operate the laser on an established laser range under the supervision of the LRSO, IAW AR 385-63, Chapter 19.

Do not fire the laser if there is anyone in the Laser Surface Danger Zone who is not wearing laser protective eyewear with curved protective lenses.

Do not fire the laser at unauthorized targets, civilian vehicles or targets that are off the range.

Do not fire the laser at reflective surfaces (flat glass, water, shiny metal, etc.). The reflections are possible hazards.

Do not attempt to repair the device unless you are specifically trained and authorized to repair the device.

APPENDIX H FORMS

OPERATIONS ACCIDENT/INCIDENT REPORT

Prescribing Directive Fort McCoy Reg 350-1

1. Date/Time group of Accident/Incident: _____

2. Type of Accident/Incident:

Personal Injury: _____

Vehicle Accident: _____

Aircraft: _____

Dud Round: _____

Fire: _____

Round Out: _____

Maneuver Damage: _____

Ammo/Weapon Malfunction: _____

MEDEVAC: _____

Environmental Spill: _____

Misfire: _____

Other: _____

3. Location of Accident/Incident (Grid if Training Area): _____

4. If personal injury involved, give the following information of injured individual(s): (use back if necessary)

NAME (LAST, FIRST, MI) _____

RANK _____

SSN _____

UNIT _____

BRANCH OF SERVICE
(USAR, ARNG, etc.)

5. Description of Incident/Injuries/Damage etc.:

(Use back for additional comments)

6. Action taken by unit:

(Use back for additional comments)

PRINTED NAME AND RANK OF OIC _____

SIGNATURE _____

UNIT _____

ON-POST BLDG/PHONE# _____

HOME STATION ADDRESS _____

HOME STATION PHONE # _____

NOTE: FOR VEHICLE ACCIDENT UNIT MUST COMPLETE AN ABBREVIATED GROUND ACCIDENT REPORT DA FORM-285-AB-R.

(REVERSE TO BE COMPLETED BY RANGE OPERATIONS)

Fort McCoy Form 340-R-E (Front) Previous versions of this form are obsolete

OPERATIONS ACCIDENT/INCIDENT REPORT (cont.)

7. Additional Comments by Unit:

1. Name of Person Notified of Accident/Incident: _____

3. Actions taken by Range Division:

[illegible]

Range Officer: _____

Range Div NCOIC: _____

Range NCOIC*: _____

Range Safety*: _____

Installation Safety:*

ASP: _____

PMO: _____

Fire Department: _____

MEDEVAC Crew: _____

OTHER: _____

Aviation Safety Officer:_____

Range Officer: 4629

Range Div NCOIC: 4639

Range NCOIC: 4505

Range Safety: 4526

Installation Safety: 3403, Fax 2164

ASP: 3604

PMO/Fire: 911

EOD: 3315

DTM NCOIC: 4515

DIR DTM: 2203

EOC: Fax 3905

PAO Fax: 3749

Cmd Gp: Fax 4168

AVIATION: 4232

*Copy required. Consult flow chart for other copies furnished.

Fort McCoy Form 340-R-E Dec 99 (Back) Previous versions of this form are obsolete

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(BY LINE/BLOCK)

Line 1: Unit completes this block. DTG of actual incident **NOT** when Range Division was notified.

Line 2: Categories of accident/incident: one must be checked off by unit. Unit should check off main cause of incident report; i.e., personnel may be injured by a weapon malfunction and a MEDEVAC called for but the cause of the incident was weapon malfunction. Attach any of Range Division sheets like EOD report, ABGR etc. that is completed by the unit.

PERSONAL INJURY: This is completed if individual injures himself during training but not related to any other incident i.e. sprained ankle while walking, eye injury because of tree limb.

VEHICLE ACCIDENT: Any accident involving one or more vehicles. Unit must complete an Abbreviated Ground Accident Report (ABGR) DA Form 285-AB-R. ABGR not required for two civilian vehicles.

AIRCRAFT: Any mishap involving an aircraft. Not for noise aircraft complaint.

DUD ROUND: When a unit finds a dud. An EOD report is attached to this report.

FIRE: Any fire reported by a unit.

ROUND OUT: Any round impacting outside of the designated impact area to include small arms impacting off range.

MANEUVER DAMAGE: Any maneuver damage reported by the unit or found by range inspectors.

AMMO/WEAPON MALFUNCTION: Any malfunction of ammo or weapons. Does not include misfires.

MEDEVAC: When unit calls for AIR medevac.

ENVIRONMENTAL SPILL: Unit or Range Division personnel reporting a spill.

MISFIRE: Reporting a misfire of 30mm or higher. Fill out necessary information for unit on front and complete the back portion. If EOD called, attach an EOD report.

OTHER: To report any type incident not mentioned here. Noise Complaints will go here.

Line 3. Either range number, site name or grid for training area.

Line 4. Self-explanatory. Unit may use separate sheet or back for more than one injury.

Line 5. This area needs to be as specific as possible in order to answer any questions that other installation organizations may have; i.e., Instead of Heat Injury unit should say something like they were operating at MOPP 4 for 5 hours at CAT VI. Water was taken at half-hour intervals.

Line 6: Specific actions taken by the unit on this incident.

OIC BLOCK: This must be filled in as much as possible in order for the OIC to be contacted regarding the incident.

Line 7: Space for additional comments

SPECIAL SITE REQUEST

Prescribing Directive Fort McCoy Reg 350-1

UNIT: _____

DATE: _____

MEMORANDUM FOR Range Division, ATTN: AFRC-FM-TMR, 110 East Headquarters Road, Fort McCoy,
WI 54656-5226

SUBJECT: Request to Perform/Establish Site for the Following Activities at the Grids and Dates Indicated

1. Request permission to establish a (see below) from _____ to _____.
(Date) (Date)

- | | | |
|--|-------------|--------------|
| a. Petroleum Distribution Site ² | Grid: _____ | Dates: _____ |
| b. Smoke Generation ^{1,4} | Grid: _____ | Dates: _____ |
| c. Hasty/Deliberate Decon Site ¹ | Grid: _____ | Dates: _____ |
| d. Road Block ¹ | Grid: _____ | Dates: _____ |
| e. Ambush Site ¹ | Grid: _____ | Dates: _____ |
| f. Earthmoving ¹ | Grid: _____ | Dates: _____ |
| g. Field Laundry Site/ Shower Point ² | Grid: _____ | Dates: _____ |
| h. Water Purification Site ² | Grid: _____ | Dates: _____ |
| i. Gray Water Site ² | Grid: _____ | Dates: _____ |
| j. Field Latrine | Grid: _____ | Dates: _____ |
| j. Other _____ ³ | Grid: _____ | Dates: _____ |

Notes

1. Overlay required.
2. Overlay not required.
3. Overlay may be required.
4. Indicate how smoke will be generated.

2. Unit POC is _____

UNIT COMMANDER SIGNATURE BLOCK

TRAINING INSPECTION CHECKLIST FOR INSPECTORS AND UNITS TRAINING ON FORT McCOY Prescribing Directive Fort McCoy Reg 350-1.		
1. To ensure that ranges, firing points, training facilities and training areas are training IAW the standards of Ft McCoy Reg 350-1, a representative from Range Division will conduct a site inspection.		
2. If a unit fails to meet the standards of this checklist it will be given an opportunity to correct the fault before the inspector departs. FAILURE TO CORRECT THE DEFICINENCY WILL RESULT IN THE UNIT BEING PLACED IN A CEASE FIRE/CEASE TRAINING STATUS WILL THE DEFICIENCY IS CORRECTED.		
STANDARDS		
TASK	PASS	FAIL
ARE THE OIC AND SAFETY OFFICER PRESENT ON SITE?		
DO THE OIC AND SAFETY OFFICER HAVE RANGE CONTROL SAFETY CERTIFICATION CARDS ON SITE? IS THE BACK SIGNED BY THE UNIT COMMANDER?		
IS AN AID BAG, LITTER AND TRANSPORT VEHICLE ON SITE? DOES THE TRANSPORT VEHICLE HAVE A RADIO? CAPABLE OF CARRYING A LITTER?		
DO PERSONNEL ON THE FIRING LINE HAVE EAR PLUGS AND HELMETS? OTHER SAFETY EQUIPMENT AS DICTATED BY RANGE? DOES UNIT HAVE BRASS DEFLECTORS FOR LEFT-HANDED FIRERS? IF NOT, IS THERE AN APPROVED EXCEPTION TO POLICY? (RANGES/FPs)		
AMMUNITION STORED PROPERLY? 2 EA 10BC OR HIGHER FIRE EXTINGUISHERS PRESENT? AMMUNITION AREA MARKED AND NO SMOKING WITHIN 50 FEET?		
DOES THE UNIT HAVE TWO OPERATIONAL MEANS OF COMMUNICATION? DOES UNIT HAVE COMMUNICATIONS WITH RANGE OPERATIONS?		
DOES THE UNIT KNOW THE CURRENT WBGT OR WIND CHILL IF APPLICABLE?		
IS THE RANGE PACKET PRESENT?		
IS AN APPROVED RANGE PLAN PRESENT FOR NON-STANDARD TRAINING/FIRING?		
IS THE RANGE FLAG FLYING? IS RED LIGHT PRESENT FOR NIGHT FIRE? ARE LIMIT MARKERS VISIBLE AND MARKED WITH RED LIGHTS FOR NIGHT FIRE?		
IS EXCESS POWDER STORED PROPERLY?		
DOES UNIT HAVE TWO AIMING CIRCLES IN USE? DOES UNIT HAVE SAFETY DIAGRAM ON SITE AND MARKED ON CHART OR MAP? ARE SAFETY TAPES OR STAKES UTILIZED? (FPs ONLY)		
REMARKS		
SITE	UNIT	
OIC	DATE	
INSPECTOR		

Fort McCoy Form 342-R-E Dec 99 Previous versions of this form are obsolete

CLEARANCE CHECKLIST FOR INSPECTORS AND TRAINING UNITS Prescribing Directive Ft McCoy Reg 350-1		
1. To ensure that ranges, training facilities and training areas are maintained and prepared for the next unit's use, each will be inspected by a representative from Range Division before departure.		
2. If a unit occupies a site or area without signing for it or fails to conduct a pre-inspection, the unit at that time takes full responsibility for the cleanliness and maintenance of the site. Units that conduct a pre-inspection and notify Range Operations of pre-existing conditions at the time of occupation will not be required to correct those conditions in order to clear the site.		
3. Items on this checklist must be completed prior to requesting an inspector. If the checklist is not completed prior to arrival of the inspector, the inspector will not conduct the final inspection at that time. You will be placed at the bottom of the list for inspections.		
CLEARANCE STANDARDS		
TASK	PASS	FAIL
ENTIRE RANGE POLICED; ENTIRE RANGE RAKED.		
ALL BRASS, TRASH AND RESIDUE REMOVED FROM THE SITE. UNSERVICIBLE TARGET MATERIAL SET TO THE SIDE. ALL AMMUNITION REMOVED FROM SITE.		
ALL FIGHTING POSITIONS POLICED AND SANDBAGS PLACED NEXT TO THE V-NOTCHED STAKES WITH THE TIES FACING TO THE RIGHT. (COVERS OFF FOR INSPECTION)		
ALL TARGET FRAMES AND SERVICABLE TARGETS PLACED IN TARGET SHED. NON-OPERATIONAL TARGETS REPORTED.		
BUILDINGS SECURED (DOORS LEFT OPEN FOR INSPECTION), POWER/CIRCUIT BREAKERS OFF, SWEEP AND CLEANED.		
RANGE SUPPORT EQUIPMENT RETURNED TO PROPER PLACE OF STORAGE. ALL NON-OPERATIONAL OR MALFUNCTIONING EQUIPMENT REPORTED.		
MANEUVER DAMAGE REPORTED AND REPAIRED.		
TELEPHONE PLUGS/HOOKUPS AND MAG LINES SERVICABLE.		
ALL WIRE POLICED.		
ALL POL SPILLS REPORTED AND CLEANED UP IAW FT McCOY REG 350-1.		
COMPLETED RANGE CONTROL CUSTOMER QUESTIONNAIRE.		
REMARKS		
SITE	UNIT	
OIC	DATE	
INSPECTOR		

Fort McCoy Form 343-R-E Dec 99 Previous versions of this form are obsolete

NBC CHAMBER QUALIFICATION STATEMENT

Prescribing Directive Fort McCoy reg 350-1

THE OIC/NCOIC, _____, OF _____
RANK/NAME UNIT/ORGANIZATION

IS QUALIFIED TO OPERATE THE FORT McCOY NBC CHAMBER BY VIRTUE OF:

_____ 1. Branch/MOS of 74A or 54B (BNCOC Graduate)

_____ 2. Attended accredited NBC school _____
YEAR/MONTH/LOCATION

_____ 3. Attended civilian police NBC Instructor Course _____
YEAR/MONTH/LOCATION

_____ Signature
OIC RANK/NAME

NBC CHAMBER SAFETY CHECKLIST

Prescribing Directive Fort McCoy Reg 350-1

DATE: _____

<u>ITEM</u>	<u>INITIALS</u>
1. OIC/NCOIC signed the Qualification Statement.	_____
2. The using unit has trained combat lifesaver personnel on hand.	_____
3. The using unit has observed the wind direction, speed and potential downwind hazards prior to charging the chamber.	_____
4. Operation of the CS Chamber by the using unit:	
a. OIC/NCOIC checked all personnel's mask for serviceability, fit and function prior to operating the chamber.	_____
b. A 5-gallon container of clean water is available for decontamination as necessary.	_____
c. Only CS pellets are used in the CS chamber.	_____
d. One assistant is placed at the chamber entrance and one assistant is at the exit.	_____
e. There are two personnel operating inside the chamber. One of the two must be the OIC/NCOIC.	_____
f. Each mask is checked for fit and seal prior to entering the chamber.	_____
g. Defective masks are replaced or repaired before the soldier is allowed to enter the NBC Chamber.	_____
h. Extra masks of different sizes for replacement or sizing problems are on hand (if not sized at home station).	_____
i. Soldiers were screened for profiles and other medical problems prior to the exercise.	_____
j. Soldiers are not subject to CS unnecessarily.	_____
k. No more than 10 soldiers participating in the exercise and the two personnel running the chamber are allowed inside the chamber at any time.	_____
l. The chamber is initially charged with no more than six CS capsules.	_____
m. No more than one capsule is used to recharge the chamber.	_____
n. Soldiers leaving the chamber are escorted out of the chamber and directed upwind, told to unmask, face into the wind, open their eyes but do not rub them. Soldiers are also informed to shower with cool water initially then warm soapy water when they bathe.	_____
o. Only 1 door is opened at any time while entering and leaving the chamber during the exercise.	_____

Fort McCoy Form 345-R-E Dec 99 Previous versions of this form are obsolete

NBC CHAMBER SAFETY CHECKLIST (cont.)

7. Clearing of the CS chamber:

a. The OIC/NCOIC determines aeration possibilities. _____

(1) Not to aerate.

(2) Wait to aerate.

(3) Open 1 door for a short period, shut the door, reopen, etc., releasing small amounts of CS at a time.

(4) Open both doors and aerate the chamber.

(5) The wind direction and speed must be taken into account when aerating the chamber to ensure CS DOES NOT REACH the road.

b. The OIC/NCOIC determines the wind direction, speed and potential downwind hazards prior to aeration. _____

c. The OIC/NCOIC checks the inside of the chamber for excess concentration/build up of CS. _____

d. Range Division checks the chamber and area for cleanliness and maintenance prior to releasing the using unit. _____

JUMPMaster QUALIFICATION STATEMENT

Prescribing Directive Fort McCoy Reg 350-1

THE OIC/NCOIC, _____,
RANK/NAME

OF _____
UNIT/ORGANIZATION

IS QUALIFIED TO OPERATE THE FACILITY BY VIRTUE OF:

- _____ 1. Attended accredited Jumpmaster School _____
YEAR/MONTH/LOCATION
- _____ 2. Attended civilian police Jumpmaster Course _____
YEAR/MONTH/LOCATION

Signature
OIC RANK/NAME

RAPPEL TOWER CERTIFICATION STATEMENT

Prescribing Directive Fort McCoy Reg 350-1

THE OIC/NCOIC/SAFETY OFFICER, _____,
RANK/NAME

OF _____
UNIT/ORGANIZATION

IS QUALIFIED TO OPERATE THE FACILITY BY VIRTUE OF:

_____ 1. Attended accredited Air Assault School _____
YEAR/MONTH/LOCATION

_____ 2. Attended accredited Rappel Master Course _____
YEAR/MONTH/LOCATION

_____ 3. Attended civilian police Rappelling Course _____
YEAR/MONTH/LOCATION

_____ Signature
OIC RANK/NAME

RAPPELLING OPERATIONS CHECKLIST (cont.)

1. BEFORE TRAINING CHECKS:

a. Rappel Tower:

- (1) Surface area adjacent to the tower where the rappellers will impact.
 - (a) Are there any holes? If so, have they been filled?
 - (b) Are there any large foreign objects present? If so have they been removed?
 - (c) Is there anything present that could endanger a rappeller?

(2) General Supporting Structure of the Tower:

- (a) Is there any structural damage?
- (b) If so, will that damage endanger personnel utilizing the facility?

(3) Stairs/Ladder leading to the Top of the Tower:

- (a) Is the structure sturdy?
- (b) Are any steps missing?
- (c) Are any steps slippery?
- (d) Are handrails present?
- (e) Will the stairs/ladder support the weight of personnel utilizing them?

- (f) Is there anything concerning the stairwell that could possibly endanger the personnel being trained?

(4) Rappelling Surface Wall:

- Is the lumber of the wall rotted?
- Are there any nails protruding from the wall?
- Is there anything on the wall that could be harmful to a rappeller?

- (d) Are there any boards missing or a gap between the boards where rappellers could get their feet caught?

(5) Top Platform of the Tower:

- (a) Are there any boards missing?
- (b) Are there any boards rotted to a degree that personnel could possibly fall through?
- (c) Is there anything present that could cause anyone to trip and fall off the tower?

[illegible]

RAPPELLING OPERATIONS CHECKLIST (cont.)

	YES	NO
(d) Are guardrails present where needed?		
(e) Are guardrails sturdy?		
(6) Anchor Points:		
(a) Are both primary and secondary anchor points present?		
(b) Are both primary and secondary anchor points independent of each other?		
(c) Are they secured enough to hold the rappellers?		
(d) Is padding present adjacent to each anchor point?		
(e) Will this padding keep the ropes from making contact with any sharp edges?		
(7) Rigging and Equipment (Snap links, Ropes, Gloves, etc.):		
(a) Is the correct equipment being used?		
(b) Is enough equipment available to replace anything that becomes unserviceable during training?		
(c) Is the tower properly rigged?		

2. GENERAL PRE-OPERATION CHECKS:

a. Equipment:

(1) The OIC and/or the Safety Officer inspects all equipment to include snap links, gloves, rappel ropes and sling ropes prior to each use.

(2) Snap links must be checked for spring pressure, proper locking, rust, nicks, burrs, lateral gate movement and pressure of gate pin.

(3) Gloves must be inspected for holes or tears in friction bearing surfaces, rips or tears in seams and presence of any petroleum products.

(4) Rappelling ropes and sling ropes must be checked for excessive wear, cuts exceeding 1/2 of one strand, fraying, mildew, presence of petroleum products and any disruption in the strands of the right hand lay of the rope.

(5) Authorized rappelling ropes: 7/16 inch diameter 3 strand multi-filament twisted rope with a right hand lay; Kermantie rope with 7/16 inch diameter. Rope will be static in nature with a minimum 4500-pound tensile strength.

(6) All ropes, snap links and gloves found unserviceable are marked, segregated and cannot be used for rappelling.

b. Anchor Points:

(1) Two or more independent anchor points must be used for all rappelling and should be able to withhold 3,000 pounds.

RAPPELLING OPERATIONS CHECKLIST (cont.)

(2) All anchor knots must be a bowline with a half-hitch and there will be a primary and secondary anchor knot on each set of rappel ropes.

(3) All rappelling is done with two ropes or one rope doubled.

(4) When snap links are used for attaching the rappel ropes to an anchor point, they are installed in pairs on each anchoring knot with the gates of the two snap links opposite one another and both gates opening away from the knot.

c. Unit Cadre:

(1) Either the OIC or Safety Officer must be a certified graduate of an U. S. Army Air Assault Course for the wall sides of the towers. OIC or Safety Officer must be Rappel Master qualified and current for the aircraft sides of the tower. Civilian units must have a certified instructor from an accredited Rappel Instructor's Course.

(2) It is required that all other cadre be a graduate of the U. S. Army Air Assault School.

3. DURING OPERATION CHECKS:

a. Rappeller Preparation:

(1) Rappellers must tuck in/secure shirttails, loose clothing and equipment straps to ensure that these items do not get caught in the snap link. Sleeves are worn down.

(2) MILES Equipment will not be worn during rappelling.

(3) Helmets with chin straps fastened must be worn during all rappelling operations.

(4) Heavy leather work gloves must be worn when rappelling.

(5) Rappel seats must be secured with a square knot and two overhand knots. Tails are secured in the rappeller's pockets.

(6) Rappellers must remove all jewelry, i.e. necklaces, rings, etc., prior to any rappelling operation.

(7) Rappellers must have their ID Card and ID tags in their possessions during all rappelling operations.

(8) Rappellers must receive a safety briefing prior to all rappelling operations.

(9) Rappellers must be inspected by a safety officer/NCO prior to each rappel.

b. Tower Rappelling:

(1) All cadre on the tower must be secured with a safety line or "Monkey Harness" at all times.

(2) All cadre must have in their possession a knife capable of cutting rappelling ropes in case a rappeller becomes entangled.

(3) Rappelling ropes must be of sufficient length to reach the ground with an additional 10 feet on the ground.

(4) There must be a Safety Officer/NCO at each lane on the tower to hook up and coach rappellers during their rappel.

(5) There must be a belay controller for every two belaymen and a belayman on each rappel rope. Belaymen will wear a helmet and no gloves.

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RAPPELLING OPERATIONS CHECKLIST (cont.)

(6) Cadre must not permit a rappeller to rappel without a verbal statement of "ON BELAY" from the belayman.

(7) There must be a recovery rope available on the tower in case rappellers become entangled during their decent.

4. SAFETY BRIEFING

a. All clothing and equipment will be secured at all times. Helmets with chin strap fastened and heavy-duty gloves will be worn at all times by rappellers.

b. MILES gear will not be worn during rappelling.

c. Rappel seats will be tied by the soldier and inspected by the cadre before climbing the tower.

d. Rappellers will climb the tower only when directed by the OIC/Safety Officer. Only one person at a time will be on each landing.

e. Rappellers will stay in the center of the tower until instructed to move to a rappelling point.

f. No more than two personnel will be behind each rappelling point.

g. All cadre on the tower will be secured with a safety line attached to an eyebolt on the floor.

h. No one will lean or sit on the railings and banisters of the tower.

i. No one will be allowed within 3 feet of the edge of the tower without being secured unless moving to a hook up point.

j. All personnel weighing in excess of 190 pounds will have two turns around the snap link.

k. While on the tower all rappellers will maintain eye to eye contact with the tower cadre and take all directions from him/her.

l. The Safety Officer/NCO will check all rappellers prior to decent.

m. Each rappeller will ensure that they have a belayman on their rope.

n. The belayman will not wear gloves but will wear a helmet. The belayman will keep both hands on the rope and keep his/her head and eyes on the rappeller at all time.

o. No soldier will rappel without first yelling "ON RAPPEL" and receiving back from the belayman "ON BELAY."

p. ALL RAPPELS WILL BE DONE WITH A DOUBLE ROPE. NO SLACK RAPPELS WILL BE ALLOWED.

q. There will be no running on the tower, no eating, drinking or smoking on or near the tower. (Point out the designated smoking point.

r. The OIC/Safety Officer explains procedures for entanglement, freezing on the rope, and other potential problems that can occur.

INDIRECT FIRE SAFETY CARD/DIAGRAM

Prescribing Directive Fort McCoy Reg 350-1

FIRING POINT OR LOCATION_____

UNIT_____

DATE OF FIRING_____

MORTAR 60mm, 81mm, 4.2, 120mm

MAXIMUM CHARGE_____

ARTILLERY 105mm, 155mm, MLRS
(CIRCLE WEAPON FIRED)

MAXIMUM RANGE_____

MINIMUM RANGE_____

MAXIMUM ORDINATE (IN FEET) _____

SHELL: _____

LEFT LIMITRIGHT LIMIT

AZIMUTH_____

AZIMUTH_____

DEFLECTION_____

DEFLECTION_____

FIRING POSITION COORDINATES_____

AZIMUTH OF FIRE_____

*NOTE: Separate safety fan will be prepared for each firing position and type of SHELL/FUZE combination. i.e.
HE w/PD, TI, MTSQ; ILL; Copperhead; WP; Direct Lay.

(Officer in Charge)

INDIRECT FIRE SAFETY CARD/DIAGRAM (cont.)

UNIT _____

OIC _____

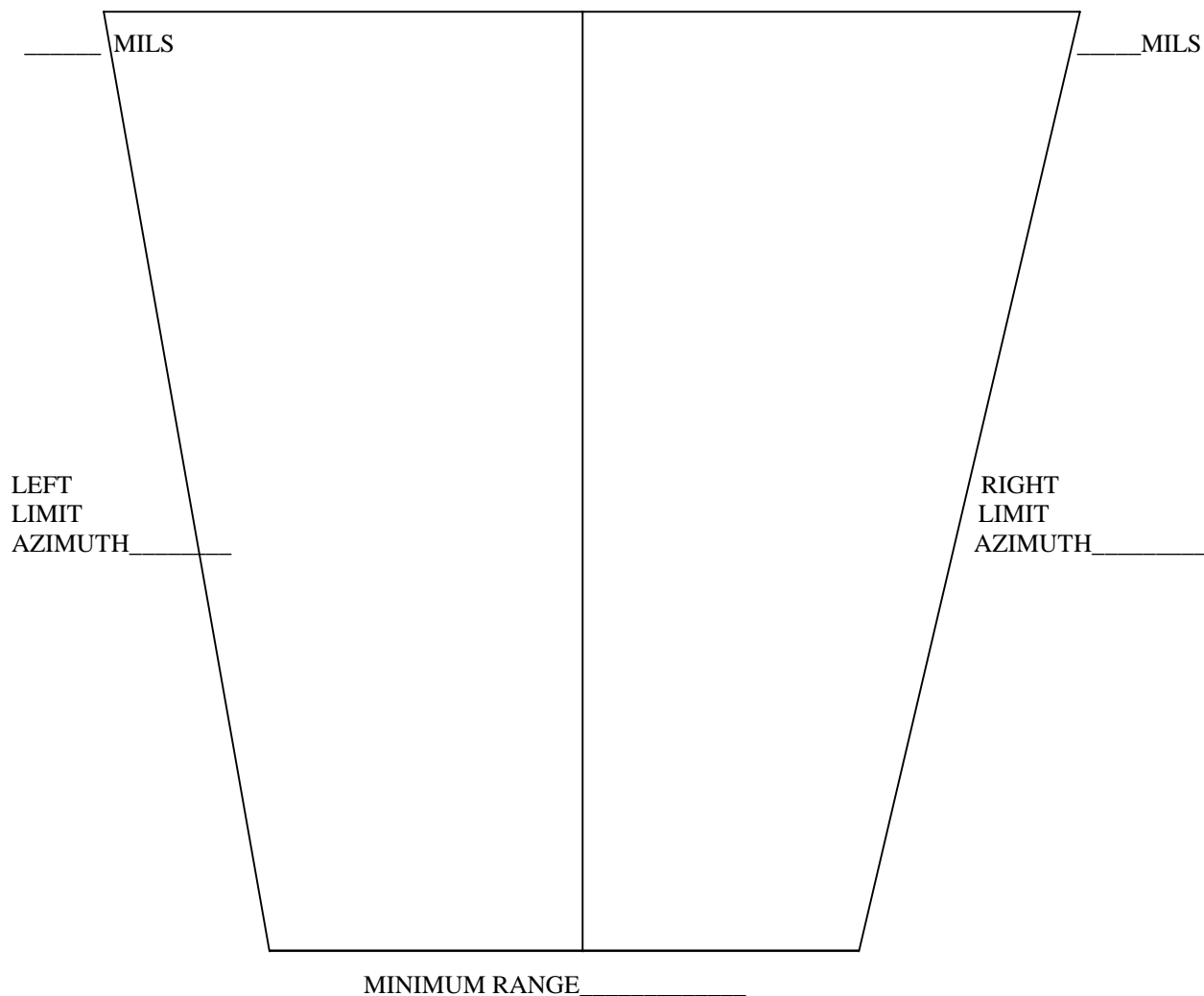
TYPE WEAPON _____

COORDINATES _____

MAXIMUM ORDINATE (IN FEET) _____

MAX RANGE _____ METERS

AZIMUTH OF FIRE



This diagram must be submitted with a completed INDIRECT FIRE SAFETY CARD attached.

INDIRECT FIRE OIC/SAFETY OFFICER CHECKLIST

Prescribing Directive Fort McCoy Reg 350-1

1. REFERENCES: AR 385-63; AR 385-62; FM Reg 350-1; FM 6-40; FM 6-50; FM 23-90; FM 23-91.
2. OIC/Safety ensures that para 5 below is completed before requesting a wet time from Range Operations.
3. The following has been accomplished when initialed:
 - a. OIC/Safety Officer have read and understood:
 - (1) FM Reg 350-1 _____
 - (2) AR 385-63 or AR 385-62 as appropriate. _____
 - (3) Chapter 11(Artillery) or Chapter 10(Mortars) AR 385-63. _____
 - (4) Chapter 11, FM 6-50 (Artillery). _____
 - (5) Section IV, Chapter 1, FM 23-90 (Mortars). _____
 - b. References in para 3a [minus (2)] are on hand on the firing point. _____
 - c. Appropriate TMs and firing tables for the weapon are on hand on the firing point. _____
 - d. Safety data (safety T) is computed and distributed to each firing section. _____
 - e. Safety fan plotted on firing charts (manual FDC) or on operations map (computer equipped FDC.) _____
 - f. Lay of unit has been verified by a second aiming circle separated by a minimum of 10 meters from the lay circle. _____
 - g. Both circles used have been declinated on Fort McCoy within 48 hours. _____
 - h. Verified min QE and compared with the elevation at min range on the safety diagram utilizing the larger of the two values. _____
 - i. A minimum of one serviceable gunner's quadrant is on the firing point. _____
 - j. Sight settings have been checked on each piece. Safety stakes and/or safety tape are emplaced corresponding with safety T. _____
 - k. Ammunition has been inspected and verified as authorized for overhead fire unless approved by Range Division. (Artillery only) _____
 - l. All tubes have been boresighted. _____
 - m. Aiming posts and/or collimeters are positioned correctly for referred deflection. _____
 - n. Each firing piece has been visually checked and verified by compass for parallel lay and correct azimuth of fire. _____

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INDIRECT FIRE OIC/SAFETY OFFICER CHECKLIST (cont.)

- o. Pits are dug or other safe method is used for unused powder increments. _____
- p. Air guard instructions have been briefed. _____
- q. Pre-fire checks have been conducted. _____
- r. Communication has been established with Range Operations and OP. _____
- s. Danger area E has been checked and is clear/blocked as necessary. _____

4. The OIC/Safety Officer initials each item in para 4-3 above, signs and dates below prior to going wet with Range Control. This checklist is subject to inspection by Range Division personnel at any time after unit obtains a wet status.

5. OIC/SAFETY OFFICER NAME AND RANK _____

OIC/SAFETY OFFICER SIGNATURE _____

UNIT _____

DATE _____

DZO FINAL REPORT

1. UNIT DESIGNATION_____
2. AIR LETTER LINE NO. _____
3. NUMBER & TYPE AIRCRAFT_____
4. DATE/TIME OF DROP_____
5. TOTAL PAX/TYPE _____ PARACHUTE JUMPED
6. DROP ZONE_____
7. DROP ALT & ALT _____ FT/ _____ KTS WIND SPEED
8. WINDS AT SURFACE_____

9. TOTAL NO. OF CONTAINERS/PLATFORMS	
DROPPED: a. HEAVY DROP_____	b. LAPES_____
c. CDS_____	d. OTHER_____

10. NO. OF PERSONNEL EVACUATED FROM THE DROP ZONE: FLA_____HALO_____ (Enter names on next page)

11. MALFUNCTIONS, ENTANGLEMENTS (Specify HIGH or LOW), UNUSUAL INCIDENTS:

NAME_____RANK_____UNIT_____

DESCRIBE MISHAP

NAME_____RANK_____UNIT_____

DESCRIBE MISHAP

12. REMARKS (Aborts, refusals, jumpers returned, unusual incidents, etc.)

13. NAME, RANK, AND DUTY TITLE OF PERSON SUBMITTING REPORT

14. TIME REPORT SUBMITTED: _____

15. REPORT RECEIVED BY: _____ DATE: _____

DZO FINAL REPORT (cont.)PERSONNEL EVACUATED

NAME_____RANK_____SSAN_____

UNIT_____TYPE OF INJURY_____CAUSE OF INJURY (CHECK)
MALFUNCTION ENTANGLEMENT PLF MISSED DZ DZ OBSTACLE OTHER

NAME_____RANK_____SSAN_____

UNIT_____TYPE OF INJURY_____CAUSE OF INJURY (CHECK)
MALFUNCTION ENTANGLEMENT PLF MISSED DZ DZ OBSTACLE OTHER

NAME_____RANK_____SSAN_____

UNIT_____TYPE OF INJURY_____CAUSE OF INJURY (CHECK)
MALFUNCTION ENTANGLEMENT PLF MISSED DZ DZ OBSTACLE OTHER

NAME_____RANK_____SSAN_____

UNIT_____TYPE OF INJURY_____CAUSE OF INJURY (CHECK)
MALFUNCTION ENTANGLEMENT PLF MISSED DZ DZ OBSTACLE OTHER

NAME_____RANK_____SSAN_____

UNIT_____TYPE OF INJURY_____CAUSE OF INJURY (CHECK)
MALFUNCTION ENTANGLEMENT PLF MISSED DZ DZ OBSTACLE OTHER

DZSO OR MACO will call FLASH Report to the DACO. DACO will call FLASH
Report to the Range Operations/MEDEVAC.

GLOSSARY**ABBREVIATIONS**

AA	Active Army
AGAR	Abbreviated Ground Accident Report
AR	Army Regulation
ARNG	Army National Guard
ASP	Ammunition Supply Point
AT	Annual Training
BCRMT	Biological & Cultural Resources Management Team
COM	Commercial
DA	Department of the Army
DOD	Department of Defense
DTM	Directorate of Training and Mobilization
ECS	Equipment Concentration Site
ED	Environmental Division
FAX	Facsimile
FM	Field Manual
FMC	Fort McCoy
FP	Firing Point
HAZMAT	Hazardous Materials Training
IAW	In Accordance With
ITAM	Integrated Training Area Management
MEDEVAC	Medical Evacuation
MHz	Megahertz
MILES	Multiple Integrated Laser Engagement System
MPH	Miles Per Hour
MPTR	Multi-Purpose Training Range
MUTA	Multiple Unit Training Assembly
NCO	Non-Commissioned Officer
NCOIC	Non-Commissioned Officer-In-Charge
NG	National Guard
NLT	Not Later Than
OIC	Officer-in-Charge
PAM	Pamphlet
PAO	Public Affairs Office
PMO	Provost Marshal Office
POC	Point of Contact

POV	Privately Owned Vehicle
RC	Reserve Component
RCSB	Reserve Component Support Branch
REG	Regulation
RFMSS	Range Facility Management Support System
SOP	Standing Operating Procedure
SSAN	Social Security Number
TM	Training Manual
TMC	Troop Medical Clinic
TMP	Transportation Motor Pool
TSC	Training Support Center
USAR	United States Army Reserve
USARC	United States Army Reserve Command
WBGT	Wet Bulb Gauge Temperature

TERMS

Accident

An accident is an unplanned event resulting in death or injury to personnel, or the loss or damage of equipment or property.

Aerial Firing Point

A surveyed location over which an armed helicopter may engage targets with its weapon systems.

Ammunition

All types of cartridges (small arms, mortar, and recoilless rifle), shot shell, explosives fuzes, detonating cord, firing devices, chemical munitions, pyrotechnics (rockets, flares, burst simulators, fire crackers) and components used in training.

Ammunition Breakdown Area

An area used for unpacking and preparing ammunition for firing. Marking requirements are the same as for service magazine.

Ammunition Lot Number

Code number that identifies a particular quantity of ammunition made by a manufacturer. The number is printed on each lot of ammunition when it is made.

Bivouac

A training facility located within a tactical area and used as an overnight Bivouac Area. No vehicles are allowed in bivouac areas.

Cease Fire

Immediate termination of all firing activities. All weapons must be cleared and made safe. Turret mounted weapons must be elevated. A cease-fire may be ordered by Range Operations personnel, the OIC, the Safety Officer or anyone observing an unsafe act.

Cease Fire Freeze

Immediate termination of all firing activities. Weapons/weapon systems are not moved or altered; all settings remain as is. Personnel are removed from in or around the weapons and guards are posted to prevent tampering. A cease fire freeze order will normally be employed when rounds have been fired out of the approved surface danger zone.

Clear

- (a) To operate a weapon to unload it, and make certain no ammunition remains in it.
- (b) To free weapons of stoppage.

Cook Off

Functioning (firing) of a chambered round of ammunition initiated by the heat of the weapon.

Dud

An explosive munitions which has been fired or otherwise activated and has failed to detonate.

Firer

Soldier at a firing position on the firing line participating in a firing exercise controlled by the control tower.

Firing Line

The line of positions from which weapons are fired. No one is permitted forward of the firing line during weapon firing, except as specifically indicated in this regulation (i.e., Target Detail, etc.).

Firing Point

- (a) The numbered position to which a firer is assigned during a firing exercise.
- (b) Surveyed point for indirect fire units. The area within a 350-meter radius of a surveyed firing point.

Firing Position

- (a) The point or location which a weapon, (other than demolition) is placed for firing.
- (b) In the case of demolition, the Firing Position is that point or location which the firing crew will be located during demolition operations.

Hang Fire

Temporary failure or delay in the action of a primer, igniter, or propelling charge. A hang fire cannot be distinguished from complete failure or misfire for several seconds. Be sure to keep the weapon pointed down range. A hang-fire for a rocket occurs if the rocket propellant is ignited by the firing impulse, but the rocket fails to exit the launcher within the expected time

Incident

An occasion of noteworthy interests that may or may not result in injury to personnel or damage to property. It may indicate factors that may result in injury or damage to property if the unit Chain-of-Command does not prevent it from occurring again.

Impact Area

The area (primary danger area) having designated boundaries within the limits of which all ordinances is to make contact with the earth's surface.

Malfunction

Any failure of an ammunition item to function as expected when fired or launched, or when explosive items function under conditions that should not cause functioning. Malfunctions include hang-fires, misfires, duds, abnormal functioning, and premature functioning.

Misfire

Failure of a primer, propelling charge of a round, or rocket/guided missile ignition and/or propulsion system to function, wholly or in part.

Officer-in-Charge - The officer (or Non-Commissioned Officer) designated by the command as responsible for range operations, training areas or training facility and who has operational control of the troops firing weapons, or utilizing a specific training area or facility.

Positive Safety Check

The act of assuring that a weapon is clear by:

- (a) inserting a rod in the muzzle end of the barrel pushed through the bore until it can be seen in the receiver;
- (b) visual inspections through bore of launcher and breach.

Range Safety Officer

An officer or qualified NCO (depending on the type of firing to be conducted) designated to assure the adequacy of safety when firing is conducted on a specific range or combination of independent ranges.

Range Safety Personnel

Those persons specifically designated to assist the Range Safety Officer in the discharge of range operations.

Rodding

The act of inserting a cleaning rod through the muzzle end of the barrel, pushed through the bore until it can be seen in the receiver.

Round of Ammunition

A round of ammunition comprises all the components necessary to fire the weapon once. In general terms, a round of ammunition consists of the following parts: primer, propellant, fuze and booster (if necessary).

Safe

The condition of a weapon, or round when it is unable to fire due to employment of a safety feature.

Safety

A locking or cutoff device that prevents a weapon, or missile from being fired when placed in the "ON" position.

Set Down Area

Designated area on each aerial firing range where aircraft experiencing a malfunctioning weapons system will land keeping weapons systems facing down range and where systems repairs may be made after weapons system is rendered safe.

Switches/Cold

Aircraft armament sub-systems are considered cold when the master arm switch on safe or off position and circuit breakers off.

Switches/Hot

Aircraft armament sub-systems are considered hot with switches on and circuit breakers in.

Target Area

The location to which firing is directed. For demolitions, the target area is the point where the demolition charge is placed.

Training Area

An area set-aside for units to train in tactics such as ambushes, patrolling and individual common tasks.

Training Facilities

A training or testing facility that is designated for training and utilization.

Unit Trainer

A qualified pilot placed on military orders as a Unit Trainer, in the applicable aerial weapons system and assigned the responsibility for the safe operation of all aircraft and its weapons systems.

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